

# The Village of Clarendon Hills

## 2016

### Annual Water Quality Statement

January 1<sup>st</sup> 2015

Thru

December 31<sup>st</sup> 2015

Available online @

[www.clarendonhills.us](http://www.clarendonhills.us)

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

## Village of Clarendon Hills 2016 CCR Annual Water Quality Statement for 2015

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. No violations were recorded for the Village of Clarendon Hills during the 2015 Consumer Confidence Reporting period.** This report summarizes the quality of water that we provided beginning January 1, 2015 and ending December 31, 2015. 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](http://www.clarendonhills.us). To participate in discussions of water quality the Village of Clarendon Hills board meetings are the 1<sup>st</sup> and 3<sup>rd</sup> 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. This plant is presently capable of producing roughly 1.4 billion gallons of potable water a day. The Environmental Protection Agency (EPA) has found that the quality of Lake Michigan has improved dramatically over the past 20 years. Lake Michigan, by volume, is the second largest Great Lake and the only one located totally within the United States. It serves as a source of drinking water, as a place for swimming and fishing and as a scenic wonderland. All 63 miles of shoreline within Illinois are now considered to be in good condition.

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. The city now looks to the recently created department of the water management, Department of Environment and the MWRDGC to assure the safety of the city's water supply. Also, water supply officials from Chicago are active members of the West Shore Water Producers Association. Coordination of water quality situations (i.e., spills, tanker leaks, exotic species, etc) and general lake conditions are frequently discussed during the association's quarterly meetings. Also, 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.

Further information on our community water supply's source water assessment is available on the USGS web site at <http://usgs.gov> or by calling the Groundwater Section of the Illinois EPA at (217) 785-4787.

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).

**2015 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 contaminants.

**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.

Village of Clarendon Hills  
Regulated Contaminants Detected

<u>Lead and copper</u>	<u>Date Sampled</u>	<u>MCLG</u>	<u>AL</u>	<u>90<sup>th</sup> %</u>	<u># of sites</u>	<u>Units</u>	<u>Violation</u>	<u>Likely Source Of Contamination</u>
Lead	9/11/2014	0	15	0	20	ppb	No	Erosion of natural deposits: leaching from preservatives corrosion of household plumbing.
Copper	9/11/2014	1.3	1.3	0.104	20	ppm	No	

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	12/31/2015	0.7	.5-.8	MRDLG = 4	MRDL	ppm	No	Water additive used control microbes.
Haloacetic Acids (Haa5)	2015	20	13.26-19.60	No goal	60	ppb	No	By-product of drinking water Chlorination.
Total Trihalo-methanes(TThm)	2015	44	43.5-43.7	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	2015	2.24	0-2.24	0	10	ppb	No	Erosion of natural deposits, runoff from production wastes.
Barium	2015	0.0364	0.0258-0.0364	2	2	ppm	No	Discharge of drilling Wastes, metal refineries, natural deposits.
Fluoride	2015	1.09	0.29-1.09	4	4.0	ppm	No	Natural deposits additive for healthy teeth, discharge from factories.
Iron	2015	1.17	0.558-1.17		1.0	ppm	No	Erosion of natural

Manganese	2015	46.3	21-46.3	150	150	ppb	No	deposits. 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	2015	50.3	50.3-50.3			ppm	No	Erosion of natural deposits. Erosion natural deposits and water softener
Combined Radium 226/228	10/25/2013	1.23	1.23-1.23	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 2014 the Village of Clarendon Hills reported no drinking water quality violations.**

**2014 City of Chicago Water Quality Data**

***Detected Contaminants***

<b><u>Turbidity Data</u></b>	<b><u>MCLG</u></b>	<b><u>MCL</u></b>	<b><u>Highest Detected</u></b>	<b><u>Range of Detection</u></b>	<b><u>Likely Source Of Contamination</u></b>
Turbidity (%<0.3 NTU)	n/a	95%≤3	99.7%	99.7-100%	Soil runoff
Turbidity (NTU)	n/a	TT=1NTU	0.45	n/a	Soil runoff

<b><u>Inorganic Contaminants</u></b>	<b><u>MCLG</u></b>	<b><u>MCL</u></b>	<b><u>Highest Detected</u></b>	<b><u>Range of Detection</u></b>	<b><u>Units</u></b>	<b><u>Likely Source of contamination</u></b>
Barium	2	2	0.0201	.0193-.0201		metal refineries: natural deposits
Nitrate (as nitrogen)	10	10	0.30	0.28-0.30ppm		Runoff from fertilizer, Leaching from septic, Natural deposits
Total Nitrate & Nitrite (as Nitrogen)	10	10	0.30	0.28-0.30 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.

**Total Organic Carbon**

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	27.2	18.8-27.2	ppm	Erosion of naturally occurring deposits
Sodium	n/a	n/a	8.48	8.04-8.48	ppm	Erosion of naturally occurring deposits. Water softener.

**State Regulated  
Contaminates**

Fluoride	4	4	1.01	0.76- 1.01	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

**UCMR3 Compliance Reporting**

In compliance with the Unregulated Contaminated 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 include volatile organic chemicals, metals, perflorinated compounds, hormones, 1,4-dioxane and chlorate. The contaminants that were detected in this monitoring program are listed below.

Chromium	100	100	0.3	0.3-0.3	ppb	Naturally occurring element: used in making steel and other alloys.
Molybdenum	NA	NA	1.1	1.0-1.1	ppb	Naturally occurring element found in ores and present in plants, animals and bacteria: Commonly used form molybdenum trioxide.
Strontium	NA	NA	120	110-120	ppb	Naturally occurring element: has been used in cathode ray tube TVs to block x-ray emissions.
Vanadium	NA	NA	0.2	0.2-0.2	ppb	Naturally occurring metal; vanadium pentoxide is used as a catalyst and a chemical intermediate.
Chromium-6 or Hexavalent Chromium	NA	NA	0.19	0.18-0.19	ppb	Naturally occurring element; used in making steel and alloy.
4-Androstene-3, 17-dione	NA	NA	0.0008	0.0006-0.0008	ppb	Steroidal hormone naturally produced in the human body; and used as an anabolic steroid and a dietary supplement
Testosterone	NA	NA	0.0001	0.0001-0.0001	ppb	Androgenic steroid naturally produced in the human body; and used in pharmaceuticals.

### **2015 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 oocytes 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 2015, 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\\_emerigincontaminantstudy.html](http://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_results_and_reports/city_of_chicago_emerigincontaminantstudy.html).

### **In 2015 the City of Chicago reported the following drinking water monitoring violation.**

The City of Chicago is pleased to announce that no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2015.

#### **Unit of Measurement**

ppm - Parts per million, or milligrams per liter      ppb - Parts per billion, or micrograms per liter      # 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      pCi/l - Pico curies per liter

#### **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**

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other's in your community as a result of materials in your home's plumbing. If you are concerned about lead levels in your home's water, you may wish to have it tested. If you do have high levels of lead be sure to run your water 30 seconds to 2 minutes any time the water remains motionless for long periods in household plumbing systems.

##### **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.