

# 2014 Water Quality Report

## Inside this issue

<b>Definitions</b>	<b>2</b>
<b>Water Quality Table</b>	<b>2-4</b>
<b>Additional Health Info</b>	<b>1</b>
<b>Source Water Assessment</b>	<b>4</b>

This Annual Water Report is for the calendar year of January 1, 2014 to December 31, 2014.

This report is intended to provide you with important information about your drinking water and the efforts made by the Glen Ellyn Public Works Utilities Division to provide safe drinking water.

The source of the drinking water used in Glen Ellyn is Purchased Surface Water from Lake Michigan.

For more information regarding this report contact: Ken Matuszak, Senior Water Plant Operator

Phone (630) 547-5503

## OVERVIEW OF GLEN ELLYN'S WATER SYSTEM

Lake Michigan is a surface water supply, providing drinking water to the City of Chicago and over 120 suburban communities. The Great Lakes system comprises 21% of the World's fresh water.

Drinking water in the Village of Glen Ellyn is supplied by the DuPage Water Commission (DWC), which purchases Lake Michigan water from the City of Chicago. Before it is purchased by the DWC, lake water is treated at Chicago's Jardine Purification Plant. After leaving the Jardine Purification Plant, the water is conveyed to DWC's metering stations and then sold to Glen Ellyn. It then goes into either the water distribution system or into a water storage facility. The Glen Ellyn water distribution system consists of 148 miles of water main, over 1,600 water main valves and 1,330 fire hydrants. We also have two standby ground water wells: 2 one-million gallon reservoirs and 2 elevated storage tanks with a combined 1.25 million gallon capacity.

The average pumpage to our customers for 2014 is 2.45 million gallons per day. This equates to 894.25 million gallons distributed, or an average of 87.5 gallons per day per person.

Glen Ellyn delivers high-quality drinking water. Many steps must be taken to attain this goal. Daily monitoring is conducted at all receiving stations. Water samples are collected at representative locations throughout the Village and brought to an independent certified laboratory for microbiological analysis. Sample collection and facility monitoring are performed by Village staff members who are IEPA certified Public Water Supply Operators. Samples are also collected and analyzed to detect specific Volatile Organic Contaminants in the water as prescribed by federal and state regulation.

The sources of drinking water (both tap and bottled water) include rivers, lakes, ponds, streams, 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.

Possible contaminants consist of:

**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 may be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and 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 may be naturally-occurring or be the result of oil and gas production and mining activities.

### Additional Health Information

In order to ensure that tap water is safe to drink, the 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.

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 (1-800-426-4791).

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 (1-800-426-4791).

### 2014 Volunteer 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 cysts 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 2012, Chicago Department of Water Management 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 at 312-742-7499. Data reports on the monitoring for Chromium-6 are posted on the City's website which can be accessed at the following address below.

**DEFINITIONS**

The table below shows the results of our water quality analysis based on tests conducted during 2014. Every regulated contaminant that was detected in the water, even in minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important.

**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 MCLG's as feasible using the best available treatment technology.

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

**Action Level (AL)**- The concentration of a contaminant that triggers treatment or other required actions by the water supply.

**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.

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

**Maximum Residual Disinfectant Level (MRDL)**- 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.

**Detected Contaminants**

Contaminant (unit of measurement) Typical Source of Contamination	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
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**Turbidity Data**

TURBIDITY (%<0.3 NTU) * Soil runoff. Lowest monthly percent meeting limit.	N/A	TT (95% ≤ 0.3NTU)	100%	100%-100%	NO	2014
TURBIDITY (NTU) * Soil runoff. Highest Single Measurement.	N/A	TT (1NTU <sub>max</sub> )	0.11	N/A	NO	2014

**NOTE:** Turbidity is a measure of cloudiness in water. The City of Chicago monitors turbidity because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants.

**Inorganic Contaminants**

ARSENIC (ppb) * Erosion of natural deposits; runoff from orchards; Runoff from glass and electronics production wastes.	0	10	1.76	0.855-1.76	NO	2014
BARIUM (ppm) * Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0227	0.0223-0.0227	NO	2014
NITRATE (As Nitrogen) (ppm) * Runoff from fertilizer use; Leaching of septic tanks; Sewerage; Erosion of natural deposits.	10	10	0.308	0.304-0.308	NO	2014
Total Nitrate & Nitrate (As Nitrogen) (ppm) * Runoff from fertilizer use; Leaching of septic tanks; Sewerage; Erosion of natural deposits.	10	10	0.308	0.304-0.308	NO	2014

**Unregulated Contaminants**

SODIUM (ppm) Erosion of naturally occurring deposits. Used in water softener.	N/A	N/A	144	49.7-144	NO	2014
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**NOTE:** There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who have concerns about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about the level of sodium in the water.

**Radioactive Contaminants**

COMBINED RADIUM 226/228 (pCi/L) * Decay of natural and man-made deposits.	0	5	0.84	0.5-0.84	NO	2014
GROSS ALPHA (pCi/L) * (Excluding radon and uranium)	0	15	6.6	6.1-6.6	NO	2014

**Coliform Bacteria**

	Positive Monthly Sample	Highest No. of Positive				
TOTAL COLIFORM	0	1	2	N/A	NO	2014
E. COLI OR FECAL COLIFORM	0	0	0	N/A	NO	2014

**ABBREVIATIONS**

N/A Not Applicable    ND Not Detected    NTU Nephelometric Turbidity Units

pCi/l Picocuries per liter (a measure of radioactivity)    ppm Parts per million, or milligrams per liter (mg/l) or one ounce in 7,350 gallons of water.

ppb Parts per billion, or micrograms per liter (ug/l), or one ounce of water in 7,350,000 gallons of water.

(\* ) Samples Collected by the City of Chicago. All other samples were collected by the Village of Glen Ellyn.

<b>Contaminant (unit of measurement) Typical Source of Contamination</b>	<b>MCLG</b>	<b>MCL</b>	<b>Highest Level Detected</b>	<b>Range of Detections</b>	<b>Violation</b>	<b>Date of Sample</b>
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**UCMR3 Compliance Reporting**

In compliance with the Unregulated Contaminant Monitoring Rule 3 (UCMR3) as required by the EPA, the City of Chicago and the Village of Glen Ellyn have 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, perfluorinated compounds, hormones, 1,4-dioxane and chlorate. The contaminants that were detected in this monitoring program are listed below.

<b>CHROMIUM (ppb)</b> * Naturally-occurring element; used in making steel and other alloys	100	100	0.3	0.2-0.3	NO	2014
<b>MOLYBDENUM (ppb)</b> * Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide	N/A	N/A	1.1	1.0-1.1	NO	2014
<b>STRONTIUM (ppb)</b> * Naturally-occurring element; has been used in cathode-ray tube TV's To block x-ray emissions	N/A	N/A	120	110-120	NO	2014
<b>VANADIUM (ppb)</b> * Naturally-occurring metal; vanadium pentoxide is used as a catalyst and a chemical intermediate	N/A	N/A	0.3	ND-0.3	NO	2014
<b>Chromium-6 or Hexavalent Chromium (ppb)</b> * Naturally-occurring element; used in making steel and alloys	N/A	N/A	0.22	0.18-0.22	NO	2014
<b>4-ANDROSTENE-3, 17-DIONE (ppb)</b> * Steroidal hormone naturally produced in the human body; and used as an anabolic steroid and a dietary supplement	N/A	N/A	0.0008	0.0006-0.0008	NO	2014
<b>TESTOSTERONE (ppb)</b> * Androgenic steroid naturally produced in the human body: And used in pharmaceuticals	N/A	N/A	0.0001	0.0001-0.0001	NO	2014
<b>CHROMIUM (ppb)</b> Naturally-occurring element; used in making steel and other alloys	100	100	0.4	0.2-0.4	NO	2014
<b>MOLYBDENUM (ppb)</b> Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide	N/A	N/A	1.1	1.0- 1.1	NO	2014
<b>STRONTIUM (ppb)</b> Naturally-occurring element; has been used in cathode-ray tube TV's To block x-ray emissions	N/A	N/A	126.5	110-126.5	NO	2014
<b>VANADIUM (ppb)</b> Naturally-occurring metal; vanadium pentoxide is used as a catalyst and a chemical intermediate	N/A	N/A	0.3	0.2-0.3	NO	2014
<b>Chromium-6 or Hexavalent Chromium (ppb)</b> Naturally-occurring element; used in making steel and alloys	N/A	N/A	0.26	0.20-0.26	NO	2014

**Total Organic Carbon**

TOC [ Total Organic Carbon ] \*  
The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by the IEPA.

**State Regulated Contaminants**

<b>FLUORIDE (ppm)</b> * Water additive which promotes strong teeth.	4	4	0.941	0.941-0.977	NO	2014
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**NOTE:** Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal range of 0.9 mg/l to 1.2 mg/l.

**Lead & Copper**

CONTAMINANT (UNITS)	MCLG	ACTION LEVEL (AL)	90th PERCENTILE	# of SITES EXCEEDING AL	VIOLATION	COLLECTION DATE	LIKELY SOURCE OF CONTAMINATION
COPPER (ppm)	1.3	1.3	.164	0	NO	2014	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.

*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. Glen Ellyn is 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 2 minutes before using the 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 your drinking water, testing methods, and steps you can take to minimize exposure to lead is available from the Safe Drinking Water Hotline (800) 426-4791 or on the web at <http://www.epa.gov/safewater/lead>.*

Contaminant (unit of measurement) Typical Source of Contamination	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
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**Disinfectants and Disinfection By-Products**

CHLORINE (ppm) Water additive used to control microbes.	MRDLG=4	MRDL=4	0.9 (Average)	0.6- 1.1	NO	2014
HALOACETIC ACIDS (HAA5) (ppb) By-product of drinking water disinfection.	No Goal for Total	60	14.00 (Average)	8.78 - 17.23	NO	2014
TOTAL TRIHALOMETHANES (TThm) (ppb) By-product of drinking water disinfection.	No Goal for Total	80	37.00 (Average)	18.94 - 38.9	NO	2014

NOTE: Not all sample results may be used for calculating the Highest Level Detected in the HAA5's and TThm's because some results may be part of an evaluation to determine where sampling should occur in the future.

**Source Water Assessment**

The Illinois EPA considers all surface water sources of a 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 the mandatory treatment of 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.

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 Public Works Department or call our water operator at (630) 547-5503. 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>.

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

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



We want our valued customers to be informed about their water quality. If you are interested in learning more about our drinking water, or have questions, please call Ken Matuszak at the Village of Glen Ellyn Public Works Utilities Division at (630) 547-5503.

Please feel free to attend any of our regularly scheduled board meetings which are posted on the Village Website: [www.glenellyn.org](http://www.glenellyn.org)