

Carol Stream Water Quality Report 2015

The Safe Drinking Water Act Amendments of 1996 require that all community water systems provide information to their customers concerning the quality of their water. This report complies with this Act by providing information on the source of your drinking water, the results of water sampling, our compliance with drinking water regulations, as well as some brief educational material.

The Village of Carol Stream is committed to providing you with this information. If upon reading this report you should have any questions or wish additional information, you are encouraged to contact Ron Roehn, Superintendent of Operations, at (630) 871-6260. Copies of this Water Quality Report are available on the Village's web page at <http://tinyurl.com/vocs-2015wqr>. Additionally, you are always welcome at the regularly scheduled Village Board Meetings that begin at 7:30pm on the first and third Monday of every month.

The Village of Carol Stream receives Lake Michigan Water that is processed by the City of Chicago at the Jardine Water Treatment Facility. The Jardine Water Treatment Facility is just north of Navy Pier on the Chicago lakefront. Lake Michigan is the source of water used to provide drinking water for Chicago and many suburban communities, including Carol Stream. The City of Chicago tests for various unregulated contaminants and posts results on their website at <http://www.cityofchicago.org>. The Village of Carol Stream is a customer of the DuPage Water Commission which purchases the water from the City of Chicago and transports it to the member communities. Water is metered and pumped into our distribution system and into the elevated and ground storage facilities.

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Lake Michigan as one of the Great Lakes is an excellent source of drinking water. However, all sources, including lakes, rivers and wells have a possibility of contamination, including contamination such as:

- 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 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 agriculture, urban stormwater 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 stormwater runoff and septic systems;
- Radioactive contaminants**, which may be naturally occurring or be the result of oil and gas production and mining activities.

Source Water Assessment

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 such 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. Throughout history, there have been extraordinary steps taken to assure a safe source of drinking water in the Chicagoland 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 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.

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. 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 (1-800-426-4791).

In order to ensure that our water is safe to drink, the USEPA prescribes regulations that limits 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.

Attached are several tables indicating the contaminants that are regulated for which the Chicago/Carol Stream drinking water has been tested. The data is separated into data as tested by the City of Chicago as the parent supply of our drinking water and the Village of Carol Stream as the satellite supplier.

The Village of Carol Stream did not have any water quality violations during 2015. The City of Chicago had no violations during the 2015 Monitoring Period as documented in the attached table.

Carol Stream 2015 Water Quality Data

Regulated Contaminants Detected in 2015
(collected in 2015 unless noted)

Lead and Copper (Date Sampled: June & July 2014)

Definitions:

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

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.

Lead & Copper	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violations	Likely Source of Contamination
Copper	1.3	1.3	0	1	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	0	15	0	1	ppb	No	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 (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 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.

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

na: not applicable.

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

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

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	0 Positive Monthly Sample	0	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. Coli Positive	0	No	

Regulated Contaminants

Disinfectants & Disinfection By-Products	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Chlorine	1.10 (7-31-2015)	0.87-1.10	4	4	ppm	No	Water additive used to control microbes
Total Haloacetic Acids (HAA5)*	16.1	14.0-16.1	N/A	60	ppb	No	By-product of drinking water chlorination
(TTHMs) Total Trihalomethanes*	31.03	28.6-31.03	N/A	80	ppb	No	By-product of drinking water chlorination

Not all sample results may have been used for calculating the highest level detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old. **MCL** (Maximum Contaminant Level): 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. **MCLG** (Maximum Contaminant Level Goal): 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. **AL** (Action Level): The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow. **ppm:** parts per million **ppb:** parts per billion, **ppt:** parts per trillion **pCi/l:** picocuries per liter (measurement of radioactivity).

2015 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.

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 of disinfectants 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.

Highest Level Detected: This column represents the highest single sample reading of a contaminant of all the samples collected in 2015.

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

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<u>Microbial Contaminants</u>						
TOTAL COLIFORM Bacteria (% pos/mo)	0	5%	2.33%	n/a	No	6/18/15
Human and animal fecal waste						
FECAL COLIFORM AND E. COLI (# pos/mo)	0	0	1	n/a	No	6/18/15
Human and animal fecal waste						
TURBIDITY (%<0.3 NTU)	n/a	TT	99.7%	99.7%-100.000%		
Soil runoff. Lowest monthly percent meeting limit.						
TURBIDITY (NTU)	n/a	TT=1 NTU max	0.45	n/a		
Soil runoff. Highest single measurement.						
<u>Inorganic Contaminants</u>						
BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0201	0.0193-0.0201		
COPPER (ppm) Corrosion of household plumbing systems; Erosion of natural deposits.	n/a	AL=1300	134 (90% percentile)	0 sites exceeding AL		6/6/14-6/23/14
LEAD (ppb) Corrosion of household plumbing systems; Erosion of natural deposits.	n/a	AL = 15	5.54 (90% percentile)	0 sites exceeding AL		6/6/14-6/23/14
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.30	0.28-0.30		
TOTAL NITRATE & NITRITE (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.30	0.28-0.30		

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<u>Disinfectants Disinfection By-Products</u>						
TTHMs [TOTAL TRIHALOMETHANES] (ppb) By-product of drinking water disinfection.	n/a	80	68.3	27.0-68.3	No	7/24/15
HAAS [HALOACETIC ACIDS] (ppb) By-product of drinking water disinfection.	n/a	60	19.9	8.98-19.9	No	7/24/15
TTHMs and HAA5s are for the Carol Stream Distribution system.						
CHLORINE (AS c112) (PPM) Drinking water disinfectant.	4.0	4.0	1.20	0.70-1.40	No	6/1/15
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 IEPA.						
<u>Unregulated Contaminants</u>						
SULFATE (ppm) Erosion of naturally occurring deposits.	n/a	n/a	27.2	18.8-27.2		
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	n/a	n/a	8.48	8.04-8.48		
<u>State Regulated Contaminants</u>						
FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	1.01	0.76-1.01		
<u>Radioactive Contaminants</u>						
COMBINED RADIUM (226/228) (PCI/L) Decay of natural and man-made deposits.	0	5	0.84	0.5-0.84		2-11-2014
GROSS ALPHA excluding radon and uranium Decay of natural and man-made deposits.	0	15	6.6	6.1-6.6		2-11-2014

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 the volatile organic chemicals, metals, per fluorinated compounds, hormones, 1,4-dioxane and chlo-

UCMR3 Compliance Reporting	MCLG	MCL	Highest Level	Range of Detections
Contaminant (unit of Measurement) Typical Source of Contaminant				
CHROMIUM (ppb) Naturally-occurring element; used in making steel and other alloys	100	100	0.3	0.2-0.3
MOLYBDENUM (ppb) Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide	NA	NA	1.1	1.0-1.1
STRONTIUM (ppb) Naturally-occurring element; has been used in cathode-ray tube TVs to block x-ray emissions	NA	NA	120	110-120
VANADIUM (ppb) Naturally-occurring metal; vanadium pentoxide is used as a catalyst and a chemical intermediate	NA	NA	0.2	0.2-0.2

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.

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

%<0.5 NTU - Percent samples less than 0.5 NTU

pCi/l - Picocuries per liter, used to measure radioactivity

2015 Non-regulated Contaminant Detections

Our water system was required to monitor for all contaminants required under the Unregulated Contaminant Monitoring Rule (UCMR II). All of the 2009 UCMR II results were non-detected. Inquiries and results may be obtained by calling the Water Quality Division Office at (312) 742-7499.

2015 Violation Summary Table

Carol Stream had no drinking water quality violations recorded during 2015.