



# Village of Westchester

## Annual Drinking Water Quality Report

IL0313150



For the period of January 1 to December 31, 2012

This report is intended to provide you with important information about your drinking water and the efforts made by the WESTCHESTER water system to provide safe drinking water. The source of drinking water used by Westchester is Purchase. For more information regarding this report, contact: Janet Matthys at (708) 345-0020.

Este informe contiene informacion muy importante sobre el agua que usted bebe. Traduzcalo o hable con alguien que lo entienda bien.

### Source of Drinking Water

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

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 (800) 426-4791.

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 contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum productions, and can also come from gas stations, urban storm runoff, and septic systems.

-Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

-Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone

organ transplants, people with HIV/AIDS or other immune systems 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 (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 or at <http://www.epa.gov/safewater/lead>

### Source Water Assessment Summary

#### 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 area 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.

#### Susceptibility to Contamination

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 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 comprising 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.

To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility of Contamination Determination; and docu-

mentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swapfact-sheets.pl>.

### **2012 Voluntary Monitory**

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 systems is greatly reduced.

### **City of Chicago Emerging Contaminant Study Analysis of Endocrine Disrupting Chemicals, Pharmaceuticals and Personal Care Products**

The city of Chicago Department of Water Management (CDWM) has completed a water quality study to monitor some compounds that have not historically been considered to be contaminants of concern, but have been recently documented at trace concentrations in our nation's waterbodies. This study, completed in the years 2009-2011, includes compounds known as Endocrine Disrupting Chemicals (EDCs) and Pharmaceuticals & Personal Care Products (PPCPs), which are considered to be emerging contaminants. EDCs are compounds with potential to interfere with natural hormone systems. PPCPs are a group of compounds consisting of prescription or over-the-counter therapeutic drugs, veterinary drugs, and consumer products such as sun-screen, lotions, insect repellent, and fragrances. The reader is encouraged to visit the United States Environmental Protection Agency (USEPA) website to learn more about EDCs (<http://www.epa.gov/ncer/science/endocrine/>) and PPCPs (<http://www.epa.gov/ppcp/>). In 2012, CDWM has also monitored for hexavalent chromium, also known as 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. A list of detected contaminants from the monitoring studies and additional information is posted on the City's website.

### **Source Water Assessment**

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our water supply has been completed by the Illinois EPA. If you would like a copy of this informa-

tion, please stop by Village Hall or call our water operator at 708-345-0041.

### **2012 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.

**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.

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

**mg/l:** milligrams per liter or parts per million – or one ounce in 7,350 gallons of water

**ug/l:** Micrograms per liter or parts per billions – or one ounce in 7,350,000 gallons of water

**average:** 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

**Maximum Residual Disinfectant Level Goal (MRDLG):** the level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

**ppm:** parts per million, or milligrams per liter

**ppb:** parts per billion, or micrograms per liter

**ppt:** parts per trillion

**pCi/l:** picoCuries per liter, measurement of radioactivity

**nd:** Not detectable at testing limits.

**n/a:** Not applicable

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

**% ≤ 0.3 NTU-**Percent of samples less than or equal to 0.3 NTU

## City of Chicago 2012 Water Quality Data

<b>Detected Contaminants</b>						
Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level Found	Range of detections	Violation	Date of Sample
<b>Microbial Contaminants</b>						
TURBIDITY (%<0.3 NTU) Soil runoff. Lowest monthly percent meeting limit.	n/a	TT/ 95%≤0.3NTU	99.7 %	99.7%-100%		
TURBIDITY (NTU) Soil runoff. Highest single measurement.	n/a	TT=1NTU max	0.69	n/a		
<b>Inorganic Contaminants</b>						
BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0204	0.0194-0.0204		
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	10	10	0.34	0.34-0.34		
TOTAL NITRATE & NITRITE (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.34	0.34-0.34		
ARSENIC (ppm) Erosion of natural deposits, runoff from orchards, runoff from glass and electronic production waste	0	10	0.67	0.52-0.67		
<b>TOC [Total Organic Carbons]</b> The percentage of Total Organic Carbons (TOC) removal was measured each month and the system met all TOC removal requirements set by IEPA.						
<b>Unregulated Contaminants</b>						
SULFATE (ppm) Erosion of naturally occurring deposits.	n/a	n/a	17.6	13.4-17.6		
SODIUM* (ppm) Erosion of naturally occurring deposits; Used as water softener	n/a	n/a	7.07	6.88-7.07		
*Note: 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.						
<b>State Regulated Contaminants</b>						
FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	0.95	0.84–0.85		
<b>Radioactive Contaminants</b>						
COMBINED RADIUM (226/228) (pCi/l) Decay of natural and man-made deposits.	0	5	1.38	1.300-1.380		3-17-08
GROSS ALPHA excluding radon and uranium (pCi/l) Decay of natural and man-made deposits.	0	15	0.88	0.090-0.880		3-17-08

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.

### **2012 VIOLATION SUMMARY TABLE FOR THE CITY OF CHICAGO**

The following table(s) list all violations that occurred during 2012. We included a brief summary of the actions we took following notification of the violation.

Contaminant or Program	Violation Type	Monitoring Period Start Date-End Date	Violation Explanation
Individual Filter Effluent Turbidity Monitoring	Minor Routine Monitoring (ISWTR/LT1)	09/01/2012-09/30/2012 10/01/2012-10/31/2012	We failed to complete all the required tests of our drinking water for the contaminant and period indicated.
Health Effects (if applicable)	None		
Actions we took:	The department of Water Management has installed a new low level turbidity detection alarm program in the electronic turbidity monitoring system and provided corrective action training to staff. This will ensure continuous filter effluent turbidity monitoring without interruption.		

## Village of Westchester 2012 Water Quality Data

Lead and Copper Date Sampled 6/8/2011								
Lead MCLG	Lead Action Level (AL)	Lead 90 <sup>th</sup> Percentile	# Sites Over- Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90 <sup>th</sup> Percentile	# Sites Over Copper AL	Likely Source of Contamination
0 ppb	15 ppb (.015 ppm)	8.92 ppb (.00759 ppm)	1	0 ppm (.00 ppb)	1.3 ppm (.0013 ppb)	< .100 ppm (< 100 ppb)	0	Corrosion of household plumbing systems; Erosion of natural deposits

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 are 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 water for drinking or cooking.

Regulated Contaminants Date Sampled January, 2012 thru December, 2012							
Disinfectants & Disinfection By- Products	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
TOTAL TRIHAOMETHANES (TTHMs)	36	17.98-57.6	n/a	80	ppb	No	By-product of drinking water chlorination
TOTAL HALOACE- TIC ACIDS (HAA5)	17	5.62-19.13	n/a	60	ppb	No	By-product of drinking water chlorination
CHLORINE	0.8	0.65– 0.82	MRDLG = 4	MRDL = 4	ppm	No	Water additive used to control microbes

Note: Chlorine residuals are taken daily from our water treatment facility. In addition, 16 chlorine residuals are taken monthly throughout our distribution system in concert with routine bacteria/coliform sampling.

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.

**No Violations were recorded for the Village of Westchester during this CCR reporting period.**

### *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.