



# 2006 Water Quality Report

## City of Wheaton



The City of Wheaton is proud of the fine drinking water we provide every day. We believe this report is a valuable source of information for our customers. We are pleased to report that our drinking water meets or exceeds all state and federal standards for water quality as regulated by the Environmental Protection Agency and the Safe Drinking Water Act.



### Overview

The City of Wheaton provides a safe, abundant supply of quality drinking water to over 56,000 people. In 2006, we delivered an average of 5.2 million gallons per day, with a peak day of over 9 million gallons in August. We are dedicated to providing the highest quality drinking water to our customers in the most efficient and professional manner.

Safety and security are always important issues that the Water Division faces. We maintain six backup wells and three diesel generators in case of emergency. All Water Division facilities are monitored by 24 hour security systems. We test the water daily and utilize 24 hour water quality monitoring. Also, Water Division personnel are available 24 hours a day, seven days a week, 365 days a year to respond to any emergencies that arise.

The Water Division maintains a backflow prevention program to prevent unwanted contaminants from entering the water distribution system. To date, over 1,400 devices must be tested annually to protect the drinking water from contamination.

### Water Source

Lake Michigan is the surface water supply used to provide drinking water for Chicago and over 100 suburban communities. The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies. The SWAP inventories potential sources of contamination and determined the susceptibility of the source water to contamination. The Illinois EPA has completed the SWAP for our supply.

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, including the City of Wheaton, while the South Water Purification Plant serves the southern areas 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.

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 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. Chicago 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 stencilling of storm water drains within a watershed. Stencilling 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 SWAP is available by calling the City of Chicago, Department of Water Management at 312-744-6635.

## 2006 Water Quality Table

The table shows the results of our water-quality analyses based on tests done in 2006. Every regulated contaminant that was detected in the water, even in the most minute traces, is listed here. Not listed are over 100 substances that were tested for, but were not detected. If you would like more information on these results, contact the Water Division. **No water quality violations were recorded for this facility during the 2006 reporting period.**

Contaminant (units)	MCLG	MCL	Level found	Range of detections	Date of sample	Violation	Typical source of contaminant
<b>Microbial Contaminants</b>							
Turbidity (%<0.3NTU)*	n/a	TT	100.000%	n/a		-	Soil runoff
Turbidity (NTU)*	n/a	TT=1NTUmax	0.15	n/a		-	Soil runoff
<b>Inorganic Contaminants</b>							
Barium (ppm)*	2	2	0.02	0.020-0.020		-	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Copper (ppm)	1.3	AL=1.3	90th Percentile 0.15	0 exceeding AL	6/27/2005	-	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (ppb)	0	AL = 15	90th Percentile <5	0 exceeding AL	6/27/2005	-	Corrosion of household plumbing systems; Erosion of natural deposits.
Nitrate (as Nitrogen)(ppm)*	10	10	0.34	0.30-0.34		-	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrate & Nitrite (ppm)*	10	10	0.35	0.30-0.35		-	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Disinfection/Disinfectant By-Products</b>							
				<b>Monitoring Date</b>			
Chlorine (as Cl <sub>2</sub> )(ppm)	4	4	Highest Level 0.7295	0.6925-0.7295	12/31/2006	-	Drinking water disinfectant
Haloacetic Acids [HAA5](ppb)	n/a	60	Highest Level 16.8	9.8-16.8	Quarterly 2006	-	Chlorination by-products total of 5 compounds.
TTHMs [Total Trihalomethanes] (ppb)	n/a	80	Highest Level 32.6	15.6-32.6	Quarterly 2006	-	By-product of drinking water chlorination.
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.						
<b>Unregulated Contaminants</b>							
Sulfate (ppm)*	n/a	n/a	28.1	27.2-28.1		-	Erosion of naturally occurring deposits.
<b>State Regulated Contaminants</b>							
Fluoride (ppm)*	4	4	0.98	0.89-0.98		-	Water additive which promotes strong teeth.
Sodium (ppm)*	n/a	n/a	Highest Level 6.80	6.70-6.80		-	Erosion of naturally occurring deposits; Used as water softener.
<b>Radioactive Contaminants</b>							
Beta/Photon Emitters (pCi/l)*	0	50	2.000	nd-2.000	11/5/2001	-	Decay of natural and man-made deposits.

\*The table above includes contaminants monitored by both the City of Chicago and the City of Wheaton. The results marked with an asterisk are based upon tests done by the City of Chicago. All others are from samples collected by the City of Wheaton.

**Turbidity** - A measure of the cloudiness of water. This is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants.

**Unregulated contaminants** - Maximum contaminant levels (MCL) for some contaminants have not been established by either state or federal regulations, nor has the mandatory health effects language. The purpose for monitoring unregulated contaminants is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.

**Fluoride** - Added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9-1.2 mg/l.

**Sodium** - There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials 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.

## Glossary 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:** Represents an average of sample result data collected during the calendar year. In some cases, it may represent a single sample if only one sample was collected.

**Range of Detections:** Represents a range of individual sample results, from lowest to highest that were collected during the 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 calendar year.

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

**Treatment Technique (TT):** A required process intended to reduce the level

of a contaminant in drinking water.

**Parts Per Million (ppm):** Equivalent to milligrams per liter. One part per million is comparable to one penny in \$10,000.

**Parts Per Billion (ppb):** Equivalent to micrograms per liter. One part per billion is comparable to one penny in \$10,000,000.

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

**%<0.3NTU:** Percent of samples less than 0.3 NTU.

**%pos/mo:** Percent of positive samples per month.

**pCi/l:** Picocuries per liter, used to measure radioactivity.

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

**n/a:** Not applicable.

**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 allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of disinfectant allowed in drinking water.

**The Chicago Department of Water Management monitors for contaminants proposed to be regulated or for which no standards currently exist but which could provide useful information in assessing the quality of the source water or the drinking water.**

**Cryptosporidium** - Analysis has been conducted monthly on the source water since April 1993. Cryptosporidium has not been detected. Treatment processes have been optimized to ensure that if there are Cryptosporidium cysts in the source water, they will be removed during the treatment process. By maintaining low turbidity and thereby removing the particles from the water, the possibility of Cryptosporidium organisms getting into the drinking water system is greatly reduced.

**Taste and odor compounds** - MIB and geosmin are monitored both in the source and finished water. The treatment process is adjusted to reduce these compounds and provide a drinking water without detectable tastes and odors.

**Toxicity** - The City of Chicago has added testing methods to those already performed to detect changes in water quality in a timely manner. Protocol for screening water samples for toxicity from chemicals and for the presence of endospores has been developed. Acute toxicity screening detects the presence of toxic chemicals and although the test does not identify individual compounds, it can be used as an early warning tool. Results thus far have not shown any positive results. Anthrax organisms belong to the group of bacteria which can produce endospores. If samples are positive for the presence of endospores, further identification can be done to determine which bacteria are present. Samples are tested to develop a historical record of results and a database of information. No harmful bacteria have been identified.

### Additional Health Information

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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. 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 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, storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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 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 is 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 are available from the Safe Drinking Water Hotline (800-426-4791)

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## For More Information

Feel free to attend regular City Council meetings. These are held on the 1st and 3rd Monday of each month at 7:00 P.M. in the council chambers at City Hall, 303 West Wesley Street.

Water quality data for community water systems throughout the U.S. is available on the internet at [www.awwa.org](http://www.awwa.org).

Additional information regarding water treatment and regulations is available at the USEPA web site at [www.usepa.gov](http://www.usepa.gov).



## Contact Information

Wheaton Water Division  
Al McMillen  
Water Superintendent:  
(630) 260-2090

Internet: [www.wheaton.il.us](http://www.wheaton.il.us)

Water bill questions: (630) 260-2024

After-hours emergencies: (630) 260-2161

EPA Safe Drinking Water Hotline:  
(800) 426-4791

American Water Works Association:  
(303) 794-7711

## Concerning Lead in Our Water

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 homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

## Facts About Water

Water is the most common substance found on earth.

The average five-minute shower uses between 15 to 25 gallons of water.

Brushing your teeth uses 2 gallons of water.

An automatic dishwasher uses an average of 9 to 12 gallons of water. Hand washing dishes can use up to 20 gallons.

The average household consumes at least 50% of its water by lawn sprinkling. Watering in the early morning or evening benefits your lawn most because less water is lost to evaporation. Taller grass withstands heat better and requires less watering.

You can survive about a month without food, but only a week without water.