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# Annual Water Quality Report

Water testing performed in 2009

## Where Does My Water Come From?

**O**ak Park began receiving drinking water from Lake Michigan via the City of Chicago in 1912. The average daily pumpage back then was about 400,000 gallons per day for its 20,000 residents. Today we pump an average of 5.1 million gallons per day for our 52,000 residents. The going rate for water in 1912 was about \$0.07 per 1,000 gallons of water.

Lake Michigan is the sole source of drinking water which arrives pretreated via pipelines from the City of Chicago's Jardine Water Purification Plant (which is the largest water treatment plant in the world!). Water is then stored in four underground reservoirs totaling 12.5 million gallons. Each of these reservoirs are drained, cleaned, inspected, and repaired as necessary every five years. Oak Park's oldest (circa 1925) and largest reservoir was done in 2008, and in 2009 the newest (completed in 2004) was inspected. 2010 will see the remaining two reservoirs (built 1960's) to be cleaned and inspected. As the water is stored in the reservoirs, the water remains in constant motion to maintain freshness. Then only a small amount of chlorine needs to be added by Oak Park before pumping it into our system of 105 miles of water mains. To ensure purity, water samples are routinely gathered throughout the water system, from the source, right to your home. A state-certified lab tests the samples using equipment that can measure substances down to one part in one billion!



Residential Customer Local  
Oak Park, Illinois



PWS ID#: 0312250

## Introduction



**T**he Village of Oak Park is proud to provide its residents once again with this annual water quality report. This year's edition covers water tested from January 1, 2009 through December 31, 2009. This report is intended to provide you with important information about your drinking water. It includes

drinking water facts, information on violations, and contaminants detected in your drinking water supply. We continue to dedicate ourselves to supplying drinking water that exceeds all state and federal drinking water standards. As new challenges to drinking water safety emerge, we remain vigilant in meeting challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

The Village of Oak Park is committed to providing you with this information because informed customers are our best allies. Please share any thoughts with us. We welcome the opportunity to discuss any questions or comments you have by contacting Brian Jack, Water and Sewer Superintendent at 708.358.5700, or e-mail [publicworks@oak-park.us](mailto:publicworks@oak-park.us).

## Community Participation

**Y**ou are invited to attend Village board meetings which are held on the first and third Monday of each month at 7:30 pm in the Council Chambers at Village Hall, 123 Madison Street. For information on the agendas, call the Village Manager's Office at 708.358.5770, or visit our web page at [www.oak-park.us](http://www.oak-park.us).

## Source Water Assessment

**T**he 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 other than dilution. This is the reason for mandatory treatment for all surface water supplies in Illinois. Chicago's offshore intakes are located at a distance great enough that shoreline impacts are not usually considered a factor on water quality. At certain times of the year, however, wet-weather flows and river reversals can potentially contaminate offshore intakes. 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 thus compromising the source water quality. Conversely, the shore intakes are highly susceptible to stormwater runoff, marinas, and shoreline point sources due to the influx of groundwater to the lake. Chicago has taken extraordinary steps to ensure a safe source of drinking water in the area, from building of the offshore cribs and

the introduction of interceptor sewers to the lock-and-dam system of Chicago's water ways and the city's Lakefront Zoning Ordinance. The City now looks to the recently created Department of Water Management, the Department of Environment, and the MWRDGC to ensure the safety of the city's water supply. 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 the 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



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everyday activities in an urban setting might have a negative impact on their source water. Efforts should be made to improve awareness of stormwater drains and their direct link to the lake within the identified local source water area. A proven best management is necessary to keep the lake safe and reliable source of drinking water. Further information on our community water supply's Source Water Assessment Program is available by calling the City of Chicago, Department of Water Management, at 312.744.6635.

## Important Health Information

**S**ome 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 system disorders, some elderly, and infants may be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water hotline at 800.426.4791.

## What's in My Water?

The City of Chicago Department of Water Management routinely monitors for contaminants in our drinking water according to Federal and State Laws. The Village of Oak Park collects 60 bacteriological samples each month along with quarterly disinfectant bi-product sampling. The compiled tables below show what substances were detected in our water for the period of January 1, 2009 through December 31, 2009. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by the U.S. EPA, we feel that it is important that you know exactly what was detected and how much of the substance was present in the water.

The Illinois EPA requires us to monitor for certain substances less than once per year because of concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES				Village of Oak Park		City of Chicago		VIOLATION	TYPICAL SOURCE
SUBSTANCE (UNITS OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	MCLG (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2009	2	2	NA	NA	0.0208	0.0201 - 0.0208	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2009	4	4	0.8	0.24 - 1.22	1.15	0.07 - 1.15	No	Water additive used to control microbes
Flouride (ppm)	2009	4	4	NA	NA	1.28	1.24 - 1.28	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	15	6.5 - 17.64	8.94	4.800 - 12.200	No	By-products of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	25	13.91 - 32.5	19.9	11.100 - 22.700	No	By-products of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2009	5% of monthly samples are positive	0	ND	NA	0.39% (in August)	NA	No	Naturally present in the environment
Total Nitrate + Nitrite (ppm)	2009	10	10	NA	NA	0.384	0.381 - 0.384	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion from natural deposits
Turbidity (NTU)	2009	TT	NA	NA	NA	0.68	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2009	TT	NA	NA	NA	98.90%	98.90% - 100%	No	Soil runoff

Tap water samples were collected for lead and copper analysis from sample sites throughout the Village of Oak Park							
SUBSTANCE (UNITS OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90th %TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	1.3	0.104	0/30	No	Corrosion of household plumbing systems; erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2009	15	0	ND	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

OTHER SUBSTANCES (CITY OF CHICAGO RESULTS)				
SUBSTANCE (UNITS OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium <sup>1</sup> (ppm)	2009	7.82	7.43 - 7.82	Erosion of naturally occurring deposits; Used in water softener regeneration
Sulfate (ppm)	2009	29.200	26.000 - 29.200	Erosion of naturally occurring deposits

<sup>1</sup>Sodium is not currently regulated by the U.S. EPA. However, the State of Illinois has set an MCL for this contaminant for supplies serving a population of 1,000 or more. The purpose of unregulated contaminant monitoring is to assist the U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Definitions	
<b>AL (Action Level):</b>	The concentration of a contaminant that triggers treatment or other required action by the water supply.
<b>MCL (Maximum Contaminant Level):</b>	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.
<b>MCLG (Maximum Contaminant Level Goal):</b>	The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
<b>MRDL (Maximum Residual Disinfectant Level):</b>	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.
<b>MRDLG (Maximum Residual Disinfectant Level Goal):</b>	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.
<b>NA:</b>	Not applicable.
<b>ND:</b>	Not detected.
<b>ppb (parts per billion):</b>	One part substance per billion parts water (or micrograms per liter).
<b>ppm (parts per million):</b>	One part substance per million parts water (or milligrams per liter).
<b>Turbidity:</b>	Turbidity is a measure of the cloudiness of the water. The City of Chicago monitors it because it is a good indicator of water quality and the effectiveness of filtration system and disinfectants.
<b>TT (Treatment Technique):</b>	A required process intended to reduce the level of a contaminant in drinking water.

## Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water, here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn the tap off while brushing your teeth or shaving.
- Check every faucet in your home for leaks, just a slow drip

can waste up to 15 - 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons per day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons per year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check your meter after 15 minutes. If it moved, you have a leak. Give the Water and Sewer Division a call to help you with this one.



## Protect Against Cross-Connections!

How? What's a cross-connection? Every household potentially has a cross-connection. Cross-connections occur when potable water (safe drinking water) connects to any contaminated source. It is important to know how to protect your water system. Here are a few places in the home where a cross-connection can exist:

- Laundry sinks and wash basins
- Boilers
- Swimming pools
- Lawn irrigation systems
- Garden hose connections to fertilizer sprayers

If a cross-connection is not properly protected and there is a drop in water pressure, untreated sources of contaminants can be drawn into your household plumbing system and into the Village's distribution system, which is known as backflow. Here is what you can do to prevent a backflow:

- Do not use a hose to open a clogged drain
- Do not leave a hose submersed in water while filling a bucket or pool
- Do not leave fertilizer applicators attached to a hose while not in use
- If you have a lawn irrigation system, make sure that a proper cross-connection device is installed and inspected
- Hose bib vacuum breakers are a simple and inexpensive device that can be installed on faucets to prevent backflows

## Substances That Might Be in Drinking Water



To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk. The sources of drinking water (both bottled and tap 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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;
- **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may 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 use;
- **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are bi-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;
- **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 800.426.4791.

## Lead and Drinking Water

In 2009, Oak Park sampled 30 homes with lead service lines and analyzed them for lead and copper content with all locations below the action levels. Oak Park is proud to report that there was no detectable amounts of lead in the water provided to the Oak Park community. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing fixtures. We are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. Lead enters the water from lead solder, lead pipes or plumbing fixtures in the home. 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 in lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## 2009 Violation Summary

The following is a list of all violations that occurred during 2009. Included is a brief summary of the actions we took following notification of the violation.

**Violation Date:** August 7, 2009

**Violation Type:** Water Treatment Plant/Distribution System Maintenance

**Violation Description:** The overflow for the Central Pump Station (TPO2) water structure is not brought down to an elevation between 12 to 24 inches above the ground and is connected directly to a sewer.

**Corrective Actions Taken:** The Village of Oak Park has been working closely with the Illinois EPA since the violation notice to correct this violation regarding the circa 1925 five million gallon reservoir overflow configuration. We have submitted a plan to redesign the overflow pipe which was approved by the Illinois EPA and we have applied for the permit to start work this July, with the planned completion of the project by October of 2010. The project will consist of rerouting the reservoir overflow pipe out of the existing manhole structure, to an open "spillway" design to meet the Recommended Standards for Water Works set forth by the Illinois EPA.