




THE VILLAGE OF OAK PARK

ANNUAL
WATER
QUALITY
REPORT

Water testing performed in 2008



PWS ID#: 0312250

Meeting the Challenge

The Village of Oak Park is proud to provide its residents with this annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we continue to dedicate ourselves to supplying drinking water that meets and exceeds all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. We welcome the opportunity to discuss any questions or comments you have.



Important Health Information

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 system disorders, some elderly, and infants may be particularly at risk from 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.

Substances That Could Be in 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 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, 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 uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-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.

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 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 and 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 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, 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 the 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 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 a 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.

Community Participation

Village board meetings are held on the first and third Monday of each month at 7:30 p.m. 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 www.oak-park.us/agendas.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org, or visit www.waterfootprint.org to see how the water footprints of other nations compare.

Questions?

For more information on this report, or for answers to any questions concerning Oak Park's drinking water, please contact Brian Jack, Superintendent of the Water and Sewer Division, at 708.358.5700, or e-mail publicworks@oak-park.us.

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 off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 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 a day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Lead and Drinking Water

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 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 www.epa.gov/safewater/lead.

Cryptosporidium Monitoring

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Since April 1993, the Chicago Department of Water Management has conducted monthly *Cryptosporidium* analyses on source water. In compliance with the new provisions of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), the City of Chicago Department of Water Management is currently undertaking monthly source water monitoring for *Cryptosporidium*, *E. coli*, and turbidity, a process that began in October 2006 and ended in November of 2008. The goal of LT2ESWTR is to require water systems, whose source water is susceptible to *Cryptosporidium* contamination, to improve control of the pathogen. Monitoring performed in 2007 did not detect any *Cryptosporidium* or *Giardia* in source water samples collected. Treatment processes have been optimized to ensure that if there are *Cryptosporidium* oocysts 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.

Where Does My Water Come From?

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. Lake Michigan is Oak Park's sole source of drinking water and arrives pretreated via pipelines from the City of Chicago's Jardine Water Purification Plant. The water is then stored in four underground reservoirs totaling 12.5 million gallons. Every five years, the reservoirs are drained, inspected, and cleaned as required by the IEPA. Oak Park's largest and oldest reservoir was done in the fall of 2008. Some minor cracks in the ceiling were sealed, and the original 1925 suction valve was cleaned and repaired. Oak Park's three other reservoirs are scheduled for maintenance in 2009 and 2010. 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 main. 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 a billion! In addition, the Village's treatment facility is constantly maintained, evaluated, and upgraded to incorporate the latest in technology, health sciences, and environmental regulations.



What's in My Water?

We are pleased to report that during the past year, the water delivered to your home and business complied with, or did better than, all state and federal drinking water requirements. For your information, we have compiled the tables below to show what substances were detected in our water for the period of January 1, 2008, through December 31, 2008. 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 state requires us to monitor for certain substances less than once per year because the 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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Village of Oak Park		City of Chicago		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Barium (ppm)	2008	2	2	NA	NA	0.0194	0.0194– 0.0194	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters¹ (pCi/L)	2008	50	0	NA	NA	1.38	1.300– 1.380	No	Decay of natural and man- made deposits
Chlorine (ppm)	2008	[4]	[4]	0.8	0.21–1.49	0.74	0.63–0.74	No	Water additive used to control microbes
Fluoride (ppm)	2008	4	4	NA	NA	1.05	0.92–1.05	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2008	60	NA	15	2.2–30.4	9.000	3.100– 14.000	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2008	80	NA	25	15.5–33.6	19.5	9.100– 29.600	No	By-product of drinking water chlorination
Total Nitrate + Nitrite (ppm)	2008	10	10	NA	NA	0.320	0.304– 0.320	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED (90TH%TILE)			SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
		AL	MCLG	AMOUNT DETECTED			
Copper (ppm)	2006	1.3	1.3	0.22	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2006	15	0	6	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

OTHER SUBSTANCES (CITY OF CHICAGO RESULTS)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium² (ppm)	2008	8.85	8.13–8.85	Erosion of naturally occurring deposits; Used in water softener regeneration

¹The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

²Sodium is not currently regulated by the U.S. EPA. However, the state 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

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

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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

