

# South Stickney Sanitary District

JOSEPH G. FORD  
Trustee  
G. F. GUSTAFSON  
Trustee  
JAY GRIDER  
Trustee

COOK COUNTY  
7801 LAVERGNE AVENUE  
BURBANK, IL 60459  
PHONE 708/424-6030 • FAX 708/424-0423

TIM GEARY  
Engineer  
JEFFERY WELLS  
ADM./Superintendent



## CONSUMER WATER QUALITY REPORT FOR 2008

For the period of January 1 to December 31, 2008

This report is intended to provide you with important information about your drinking water and the efforts made by the South Stickney Sanitary District water system to provide safe drinking water. The source of drinking water used by South Stickney Sanitary District is Lake Michigan surface water that we purchase from our parent supplier, the Chicago Water System. This water is treated at Jardine Treatment Plant and enters our system along our town's limits.

### **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 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 waste 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. 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* 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. South Stickney Sanitary District is 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 <http://www.epa.gov/safewater/lead>.

We are committed to providing you with this information, because informed customers are our best allies. If you should have any questions regarding this report, please contact Jeffery Wells, superintendent at South Stickney Sanitary District M-F 8:00am-5:00pm at (708) 424-6030.



SERVICE AND COURTESY TO THE PUBLIC ARE THE GUIDING PRINCIPLES OF THIS OFFICE  
WE WELCOME YOUR SUGGESTIONS TO IMPROVE OUR SERVICE



# SOUTH STICKNEY

## 2008 Water Quality Data

### Regulated Contaminants Detected in 2008

#### Coliform Bacteria

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	1 positive monthly sample	1		0	No	Naturally present in the environment

#### Lead and Copper 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 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. 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. ALG's allow for a margin of safety.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	06/06/2006	1.3	1.3	.138	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	06/06/2006	0	15	14.9	3	ppb	N	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.

**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.

#### Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violations	Likely Source of Contaminant
Chlorine	12/31/2007	1.1	0.2 - 1.1	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes
Total Haloacetic Acids (HAA5)	4/16/2007	13	8.09 - 13.3	N/A	60	ppb	No	By-product of drinking water chlorination
TTHMs (Total Trihalomethanes)	10/2/2007	28	16.89 - 31.5	N/A	80	ppb	No	By-product of drinking water chlorination

**Note:** 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.

**NO DRINKING WATER QUALITY VIOLATIONS WERE RECORDED FOR SOUTH STICKNEY DURING 2008**

## 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 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.

\*Highest Running Annual Average Computed.

# CHICAGO 2008 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.

**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

## Detected Contaminants

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<b>Microbial Contaminants</b>						
<b>TOTAL COLIFORM Bacteria (% pos/mo)</b> Human and animal fecal waste.	0	5%	0.76% in Sept	n/a		
<b>FECAL COLIFORM AND E. COLI (% pos/mo)</b> Human and animal fecal waste.	0	0	3	n/a		
<b>TURBIDITY (&lt;0.3 NTU)</b> Soil runoff. Lowest monthly percent meeting limit.	n/a	TT	100%	n/a		
<b>TURBIDITY (NTU)</b> Soil runoff. Highest single measurement.	n/a	TT=1NTUmax	0.14	n/a		
<b>Inorganic Contaminants</b>						
<b>BARIUM (ppm)</b> Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.0194	0.0191 - 0.0194		
<b>NITRATE (AS NITROGEN) (ppm)</b> Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.320	0.304 - 0.320		
<b>TOTAL NITRATE &amp; NITRITE (ppm)</b> Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.320	0.304 - 0.320		
<b>Disinfectants\Disinfection By-Products</b>						
<b>TTHMs [TOTAL TRIHALOMETHANES] (ppb)</b> By-product of drinking water disinfection.	n/a	80	19.500*	9.100 - 29.600		
<b>HAA5 [HALOACETIC ACIDS] (ppb)</b> By-product of drinking water disinfection.	n/a	60	9.000*	3.100 - 14.000		
<b>CHLORINE (as C12) (ppm)</b> Drinking water disinfectant.	4.0	4.0	0.74	0.63 - 0.74		
*TTHMs and HAA5s are for the Chicago distribution system. Not all sample results were used for calculating the Highest Level Detected because some results include the IDSE study for future compliance that is included in the range of results. Initial Distribution System Evaluation Standard Monitoring Plan. Stage 2 DBPR promulgated on January 2006.						
<b>TOC [TOTAL ORGANIC CARBON]</b> 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>						
<b>SULFATE (ppm)</b> Erosion of naturally occurring deposits.	n/a	n/a	28.900	27.700 - 28.900		
<b>State Regulated Contaminants</b>						
<b>FLUORIDE (ppm)</b> Water additive which promotes strong teeth.	4	4	1.05	0.92 - 1.05		
<b>SODIUM (ppm)</b> Erosion of naturally occurring deposits; Used as water softener.	n/a	n/a	8.85	8.13 - 8.85		
<b>Radioactive Contaminants</b>						
<b>COMBINED RADIUM (226/228) (pCi/l)</b> Decay of natural and man-made deposits.	0	5	1.38	1.300 - 1.380		
<b>GROSS ALPHA excluding radon and uranium (pCi/l)</b> Decay of natural and man-made deposits.	0	15	0.88	0.090 - 0.880		

**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

## 2008 Violation Summary Table

The following table(s) lists all violations that occurred during 2008. 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/LTI)	12/1/2008 - 12/31/2008	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 South Water Purification Plant failed to complete all the required tests for individual Filter Effluent Turbidity for various times in less than a 24-hour period on December 28, 2008. This failure was in part due to a series of voltage drops caused by the local electrical utility. However, monitoring was manually performed regularly on the combined filter clearwells, as well as the finished water leaving the treatment plant via the outlets by our on-duty Water Chemists. These tests showed that we remained within the USEPA parameters and guidelines and that there was no change in water quality during the time that the individual filter effluent turbidimeters were off-line. The Department of Water Management will provide additional training and purchase portable turbidity monitoring equipment. This will ensure continuous filter effluent turbidity monitoring without interruption.		

# 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 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 the Water Management, Department of Environment and the MWRDGC to assure the safety of the city's water supply. Also, water supply of 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. In compliance with the new provisions of the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), the Chicago Department of Water Management completed monthly source water monitoring for Cryptosporidium, E. coli, and turbidity, a process that began in October 2006 and ended in September 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 during this time period did not detect any Cryptosporidium or Giardia in source water samples collected.

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.

Return Service Requested

South Stickney Sanitary District  
COOK COUNTY, ILLINOIS  
7801 SOUTH LAVERGNE AVENUE  
BURBANK, ILLINOIS 60459

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MAIL  
U.S. POSTAGE  
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