

# City of Naperville Annual Water Quality Report for 2009

## Definitions and Abbreviations

The following definitions of terms, abbreviations and units of measurement apply to the tables in this report which contain the 2009 water quality data:

**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.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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.

**Maximum Residual Disinfectant Level (MRDL):** 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.

**Highest Level Found:** This column represents the highest result measured or 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. For turbidity, it is also the lowest monthly percentage of samples meeting the turbidity limits for the filtration technology being used.

**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.

**ppm:** Parts per million or milligrams per liter - or one ounce per 7,350 gallons of water.

**ppb:** Parts per billion or micrograms per liter - or one ounce per 7,350,000 gallons of water.

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

**n/a:** Not applicable.

**pCi/l:** Picouries per liter (measure of radioactivity.)

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

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

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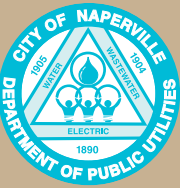
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Este informa contiene información muy importante sobre el agua que usted bebe. Tradúzcala o habla con alguien que lo entienda bien.

# CONSUMER CONFIDENCE REPORT Water Quality Report for 2009



## Introduction

The City of Naperville has developed and distributed this water quality report as part of our continued effort to provide our water customers with educational information regarding Naperville's drinking water supply. This report also serves to demonstrate that our Lake Michigan drinking water supply, purchased through the DuPage Water Commission from the City of Chicago, is safe by meeting and/or exceeding all water quality standards as listed in the Safe Drinking Water Act (SDWA).

The United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency (IEPA) continually monitor all drinking water utilities to maintain compliance with SDWA regulations. *As required by the Consumer Confidence Report (CCR) regulations of the recently-amended SDWA, a water quality report will be distributed on an annual basis to all water customers by July 1 of each year.*

**No drinking water quality violations were recorded during 2009 for the City of Naperville. All monitoring and reporting requirements were met.**

If you have any questions or comments regarding this report or our water supply system, please contact David Nykiel, P.E., Operations Manager for the Water Supply and Reclamation Division, Department of Public Utilities, at (630) 420-6122. We want our valued customers to be informed about their water quality and safety. This report is also available on the City of Naperville Web site at [www.naperville.il.us](http://www.naperville.il.us).

## General Information About Drinking Water

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 USEPA's Safe Drinking Water Hotline (800) 426-4791.

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. USEPA/CDC guidelines on appropriate

means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (800) 426-4791.



**In order to ensure that tap water is safe to drink, the USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.**

## Contaminants and Sources

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 can dissolve naturally occurring minerals, radioactive materials and pick up substances and contaminants 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 may be naturally

occurring or 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 may be naturally occurring or be the result of oil and gas production and mining activities

## Lead and Household Plumbing

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.

The City of Naperville 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 two 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](http://www.epa.gov/safewater/lead).

## Source Water Location and Assessment

The Jardine Water Purification Plant in the City of Chicago is the largest in the world serving both portions of Chicago and the suburbs. Jardine draws water from Lake Michigan at two separate locations. Here the water is treated and pumped to Naperville through the DuPage Water Commission for consumption.

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, the potential for contamination exists due to wet-weather flows and river reversals. In addition, the placement of the crib structures 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.

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.



## Emergency Wells

The City of Naperville maintains emergency wells in the event of a catastrophic loss of our source water supply from Lake Michigan. The city's emergency wells are flushed and tested monthly but are not pumped into the drinking water system. None of the city wells were utilized as a source of drinking water in 2009. This "raw water" data is not included in this report's tables but is available upon request at (630) 420-6122.

## 2009 Water Quality Data for the City of Naperville

### DETECTED CONTAMINANTS

#### Disinfectant By-Products

Contaminant (units)	MCLG	MCL	Highest Level Found	Range of Detections	Violation	Sample Date	Typical Source of Contaminant
Total Haloacetic Acids (HAA5) (ppb)	n/a	60	14	10.3 - 21.8	No	2009	By-product of drinking water chlorination.
Total Trihalomethanes (TTHMs) (ppb)	n/a	80	32	18.6 - 41.7	No	2009	By-product of drinking water chlorination.
Chlorine (ppm)	MRDLG=4	MRDL=4	>2.20	0.12 - >2.20	No	2009	Water additive used to control microbes.

This high chlorine result was not typical. The next highest chlorine level detected for 2009 was 1.14 ppm.

#### Lead and Copper

Contaminant (units)	MCLG	AL	90th Percentile	Number of Sites Over AL	Sample Date	Typical Source of Contaminant
Copper (ppm)	1.3	1.3	<0.1	0	2009	Corrosion of household plumbing systems. Erosion of natural deposits. Leaching from wood preservatives.
Lead (ppb)	0	15	<5	0	2009	Corrosion of household plumbing systems. Erosion of natural deposits.

#### Coliform Bacteria

Contaminant	MCLG	MCL	Highest Level Found	Violation	Sample Date	Typical Source of Contaminant
Total Coliform	0	5% of monthly samples are positive	1.6% of monthly samples	No	2009	Naturally present in the environment.
Fecal Coliform	0	0	0	No	2009	Naturally present in the environment.

## 2009 Water Quality Data for the City of Chicago

### DETECTED CONTAMINANTS

Contaminant (units)	MCLG	MCL	Highest Level Found	Range of Detections	Violation	Sample Date	Typical Source of Containment
<b>Microbial Contaminants</b>							
Turbidity (%<0.3NTU)	n/a	TT	98.900%	98.900%-100.000%	No	2009	Soil runoff. Lowest monthly percent meeting limit.
Turbidity (NTU)	n/a	TT=1NTU max	0.68	n/a	No	2009	Soil runoff. Highest single measurement.
<b>Inorganic Contaminants</b>							
Barium (ppm)	2	2	0.0208	0.0201-0.0208	No	2009	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Nitrate (as nitrogen) (ppm)	10	10	0.384	0.381-0.384	No	2009	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
Total Nitrate & Nitrite (ppm)	10	10	0.384	0.381-0.384	No	2009	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
<b>Unregulated Contaminants</b>							
Sulfate (ppm)	n/a	n/a	29.200	26.000-29.200	No	2009	Erosion of naturally occurring deposits.
<b>Non-Regulated Contaminants</b>							
Boron (ppb)	n/a	n/a	28.0	28.0-28.0	No	1/29/07	Erosion of naturally occurring deposits. Used in detergents and as a water softener. Used in production of glass, cosmetics, pesticides, fire retardants and leather tanning.
Molybdenum (ppb)	n/a	n/a	31.0	0-31.0	No	1/29/07	Erosion of naturally occurring deposits. Used in manufacture of special steels.
<b>State Regulated Contaminants</b>							
Fluoride (ppm)	4	4	1.28	1.24-1.28	No	2009	Water additive which promotes strong teeth.
Sodium (ppm)	n/a	n/a	7.82	7.43-7.82	No	2009	Erosion of naturally occurring deposits. Used as water softener.
<b>Radioactive Contaminants</b>							
Combined Radium (226/228) (pCi/L)	0	5	1.38	1.300 -1.380	No	3/17/08	Decay of natural and man-made deposits.
Gross Alpha excluding radon and uranium (pCi/L)	0	15	0.88	0.090-0.880	No	3/17/08	Decay of natural and man-made deposits.

### City of Chicago Water Quality Data Table Footnotes

<b>Turbidity (NTU)</b>	Turbidity is a measure of the cloudiness of the water caused by suspended particles. It is monitored because it is a good indicator of water quality and the effectiveness of filtration systems and disinfectants.
<b>Unregulated Contaminants</b>	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.
<b>Fluoride</b>	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.
<b>Sodium</b>	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>Non-Regulated Contaminants</b>	This table identifies contaminants detected within the past five years. State and federal regulations do not require monitoring for these contaminants and no MCL has been established. These detections are for informational purposes only. No mandated health effects language exists.