# Consumer Confidence Report for the City of Naperville 2010

*Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.*

**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 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 to all water customers by July 1 of each year.

**No drinking water quality violations were recorded during 2010 for the City of Naperville. All monitoring and reporting requirements were met.**

We want our valued customers to be informed about their water quality and safety. 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. Our City Council usually meets the first and third Tuesday of each month at 7:00 pm at the municipal center. Additionally, this report is available on the City of Naperville Web site at 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 the 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.

**Source Water Location**

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, 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.

**Susceptibility to Contamination**

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.

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

**2010 Voluntary Monitoring**

The City of Chicago has continued monitoring for Cryptosporidium, Giardia and E. coli in its source water as part of its water quality program. To date, Cryptosporidium has not been detected in these samples, but Giardia was detected in 2010 in one raw lake water sample collected in September 2010. Treatment processes have been optimized to provide effective barriers for removal of Cryptosporidium oocysts and Giardia cysts in the source water, effectively removing these organism in the treatment process. By maintaining low turbidity through the removal of particles from the water, the possibility of Cryptosporidium and Giardia organisms getting into the drinking water system is greatly reduced.

**City of Naperville 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 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 2010. Our well water test data is not included in this report's tables but is available upon request at (630) 420-6122.

**City of Naperville and City of Chicago Water Quality Table Educational Footnotes, Definitions, and Abbreviations**

**Turbidity (NTU)**: Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of filtration systems 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 Public 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.

**Unregulated Contaminant Monitoring Rule II (UCMRII)**: Chicago's water system was required to monitor for all contaminants required under the Unregulated Contaminant Monitoring Rule II (UCMRII). All of the 2009 UCMR II and the February 2010 results were non-detected. A final Round #4 sampling is scheduled for May, 2011. Inquires and results may be obtained by calling the Water Quality Division office at (312) 742-7499.

**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.

**Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

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

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

**nd**: Not detectable within testing limits. **n/a**: Not applicable

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

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

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

**NTU**: Nephelometric Turbidity Unit, used to measure the cloudiness of water.

# 2010 Water Quality Detected Contaminants for the City of Naperville

| City of Naperville Disinfectant By-Products | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Contaminant (Units)** | **MCLG** | **MCL** | **Highest Level Detected** | **Range of Detections** | **Violation** | **Sample Date** | **Typical Source of Contaminant** |
| Total Haloacetic Acids (HAA5) (ppb) | n/a | 60 | 16* | 14.7-18.9 | No | 2010 | By-product of drinking water chlorination. |
| Total Trihalomethanes (TTHMs) (ppb) | n/a | 80 | 34* | 25.5-45.8 | No | 2010 | By-product of drinking water chlorination. |
| Chlorine (ppm) | MRDLG=4 | MRDL=4 | 0.7* | 0.4758-0.7923** | No | 2010 | Water additive used to control microbes. |

*Highest Running Annual Average
**Highest and Lowest Monthly Averages

| City of Naperville Coliform Bacteria | | | | | | |
|---|---|---|---|---|---|---|
| **Contaminant** | **MCLG** | **MCL** | **Highest Level Detected** | **Violation** | **Sample Date** | **Typical Source of Contaminant** |
| Total Coliform | 0 | 5% of monthly samples are positive | 2.3% | No | 2010 | Naturally present in the environment. |
| Fecal Coliform | 0 | 0 | 0 | No | 2010 | Naturally present in the environment. |

# 2010 Water Quality Detected Contaminants for the City of Chicago

| **Contaminant (Units)** | **MCLG** | **MCL** | **Highest Level Detected** | **Range of Detections** | **Violation** | **Sample Date** | **Typical Source of Contaminant** |
|---|---|---|---|---|---|---|---|
| **City of Chicago Microbial Contaminants** | | | | | | | |
| Turbidity (%<0.3NTU) | n/a | TT | 99.740% | 99.740%-100.000% | No | 2010 | Soil runoff. Lowest monthly percent meeting limit. |
| Turbidity (NTU) | n/a | TT=1NTU max | 0.38 | n/a | No | 2010 | Soil runoff. Highest single measurement. |
| **City of Chicago Inorganic Contaminants** | | | | | | | |
| Barium (ppm) | 2 | 2 | 0.0182 | 0.0175-0.0182 | No | 2010 | Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits. |
| Nitrate (as Nitrogen) (ppm) | 10 | 10 | 0.311 | 0.288-0.311 | No | 2010 | Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits. |
| **City of Chicago Synthetic Organic Contaminants (including pesticides and herbicides)** | | | | | | | |
| Di(2-ethylhexyl)phthalate (ppb) | 0 | 6 | 0.76 | 0.00-0.76 | No | 2010 | Discharge from rubber and chemical factories. |
| **City of Chicago Disinfectants/Disinfection By-Products** | | | | | | | |
| 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. | | | | | | |
| **City of Chicago Unregulated Contaminants** | | | | | | | |
| Sulfate (ppm) | n/a | n/a | 33.60 | 30.400-33.600 | No | 2010 | Erosion of natural occurring deposits. |
| Sodium (ppm) | n/a | n/a | 8.98 | 8.26-8.98 | No | 2010 | Erosion of natural occurring deposits. Used as water softener. |
| **City of Chicago State Regulated Contaminants** | | | | | | | |
| Fluoride (ppm) | 4 | 4 | 0.817 | 0.651-0.817 | No | 2010 | Water additive which promotes strong teeth. |
| **City of Chicago Radioactive Contaminants** | | | | | | | |
| 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. |