A nighttime photograph of a city street in Chicago, featuring light trails from traffic and the illuminated Wrigley Building. The sky is a deep blue, and the buildings are lit up with warm lights. The Wrigley Building is the central focus, with its iconic tower and ornate facade clearly visible. Light trails from cars and streetlights create a sense of motion and energy in the scene.

THE CITY OF CHICAGO'S
WATER
2005 QUALITY REPORT

SERVING YOU BETTER BY WORKING SMARTER.

RICHARD M. DALEY, MAYOR

THE DEPARTMENT OF WATER MANAGEMENT

BRIAN S. MURPHY, COMMISSIONER

CONTACT INFORMATION

Water in the Street or Basement Call 311

Water Quality Questions (312) 744-8190

Water Bill Questions (312) 744-4H2O
TTY (312) 744-2968

E-mail and Internet E-mail: water@cityofchicago.org
www.cityofchicago.org/watermanagement

When e-mailing always include your name, account number & call back number.

EPA's Water Resource Center (800) 832-7828

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

EPA's Regional Offices (Illinois) (312) 353-4919

EPA's General Information Line (312) 353-2000
TTY (312) 886-4658

THINGS YOU CAN DO TO CONSERVE WATER

With the growing demand for water, we all need to participate in good water management. Here are some things you can do:

- Observe lawn-watering hours of early morning and early evening.
- Use only the water you need. Do full loads of laundry and dishes.
- Check toilets and other plumbing for leaks and drips.
- Consider using a rain barrel to collect water for gardens.
- Use water-efficient appliances and fixtures.
- Keep chemicals and motor oils out of our sewers.
- Look for opportunities to create green space, or replace concrete with permeable paving material.

By taking action you can help prevent flooding and help preserve one of our greatest assets: a bountiful and clean Lake Michigan.

**PLEASE VISIT OUR WEBSITE
FOR MORE INFORMATION**

www.cityofchicago.org/watermanagement



New Services

Interactive Voice Response

- Announcing a new-state-of-the art Automated Telephone Response System (312) 744-4H2O
- Check status of your bill, make payment, apply for a payment plan
- Available soon: Senior Citizen Exemption

Full Payment Certificates (FPC)

- Allows on-line water account access for title companies to expedite real estate closings
- Automatically transfers account from the seller to the buyer

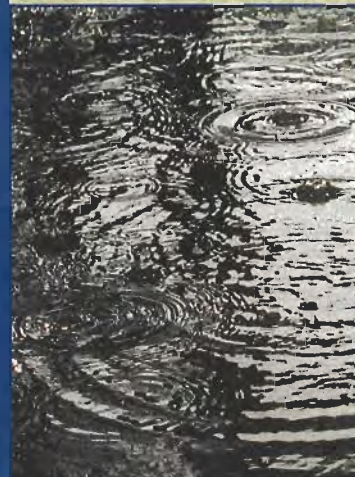
Automatic Meter Reading (AMR)

(Available soon)

- Provides consistent accurate billing
- No on-site visits needed

On-Line Payment

- Convenient on-line water bill payment at www.cityofchicago.org/watermanagement



RAIN BARRELS

Working with the Department of Environment, we are again offering rain barrels this summer and fall. The 55-gallon food-grade storage barrels include a spigot, drain hole, overflow hole and mosquito screening over all openings. To apply, visit our website at www.cityofchicago.org/watermanagement and look for the link. You must meet several qualifications to be eligible for a rain barrel.

Chicago water customers enjoy the lowest rates of any big city in the country



Average Water Bill in Major Metropolitan Cities

(Based on Average Chicago Single Family Consumption)

LOW PRICE—We charge \$1.33 per 1,000 gallons. That means that for the price of an 8 oz. bottle of water from the store, you get 1,000 gallons from us—piped right into your home.

Water Quality Data Table Footnotes

TURBIDITY: Turbidity is a measure of the cloudiness of water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

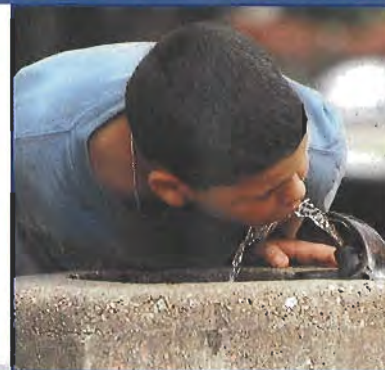
FLUORIDE: Fluoride is added to the water supply to help promote strong teeth. The Illinois Department of Public Health recommends an optimal fluoride range of 0.9 mg/l to 1.2 mg/l.

SODIUM: There is not a state or federal maximum contaminant level 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.

HAA5: Effective January 2002, HAA5 is a regulated parameter.

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 of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

WATER 2005



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 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 (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health.

Level Found: This column represents an average of sample results collected during the Consumer Confidence Report (CCR) calendar year. In some cases, it may represent a single sample if only one sample was collected.

Range of Detection: 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 CCR 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.

Cryptosporidium: Analysis has been conducted monthly on the source water since April 1993. Cryptosporidium has not been detected. Treatment processes have been optimized to ensure that if there are cryptosporidium cysts 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 threat of cryptosporidium organisms getting into drinking water system is greatly reduced. The most common source of contamination from cryptosporidium is animal waste.

Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home might be higher than other homes in your community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home, flush your tap for 30 seconds to 2 minutes before using tap water, or you may wish to have your water tested. Additional information is available from the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Violation Description

There were no monitoring violations during 2005

Start

Finish

Unit of Measurement

ppm – Parts per million, or milligrams per liter

ppb – Parts per billion, or micrograms per liter

ppt – Parts per trillion, or nanograms per liter

NTU – Nephelometric Turbidity Unit, used to measure cloudiness in drinking water

%<0.5 NTU – Percent samples less than 0.5 NTU

% pos/mo – Percent positive samples per month

pCi/L – picocuries per liter, used to measure radioactivity

nd – Not detectable at testing limits

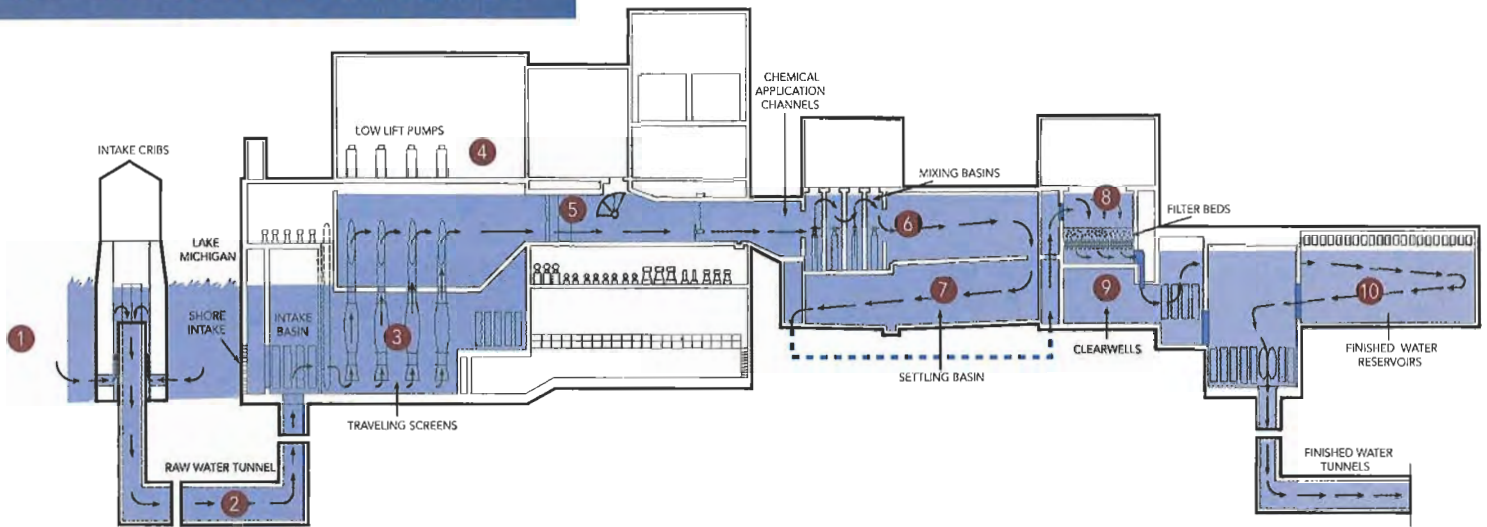
n/a – Not applicable

< = less than, > = greater than

2005 Water Quality Data: Detected Contaminants

Contaminant (unit of measure) Typical Source of Contaminant	MCLG	MCL	Level Found	Range of Detection	Violation	Date of Sample
Microbial Contaminants						
TOTAL COLIFORM BACTERIA (% pos/mo) Naturally present in the environment.	0%	5%	0.72%	Highest level was in April 2005 (4 out of 552 samples)	--	--
Fecal Coliform and E. Coli ¹ (# samples) Human and animal fecal waste	0	--	1	--	--	03/11/05
TURBIDITY (%<0.3 NTU) Soil runoff.	n/a	TT	100.00%	n/a	--	--
TURBIDITY (NTU) Soil runoff.	n/a	TT=1NTU _{max}	0.095	0.08 - 0.12	--	--
Inorganic Contaminants						
BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	2	2	0.021	0.020 - 0.022	--	--
CHROMIUM (ppb) Discharge from steel and pulp mills; Erosion of natural deposits	100	100	5.6	nd - 5.6	--	--
COPPER (ppm) Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	1.3	AL=1.3	0.024	0 sites exceeding AL	--	06/03/03 to 07/24/03
LEAD (ppb) Corrosion of household plumbing systems; Erosion of natural deposits.	0	AL=15	4	0 sites exceeding AL	--	06/05/03 to 07/24/03
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.340	nd - 0.340	--	--
NITRATE & NITRITE (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.340	nd - 0.340	--	--
Disinfectant/Disinfection By-Products						
TTHMs [TOTAL TRIHALOMETHANES] (ppb) By-product of drinking water disinfection.	n/a	80	16.100	10.000 - 22.500	--	--
HAA5 [HALOACETIC ACIDS TOTAL OF 5] (ppb) By-product of drinking water disinfection.	n/a	60	8.350	5.500 - 10.700	--	--
CHLORINE (as Cl ₂) (ppm) Drinking water disinfectant.	4 MRDLG	4MRDL	0.69 <small>Highest level found</small>	0.64 - 0.69	--	--
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 the Illinois Environmental Protection Agency.						
Radioactive Contaminants						
BETA/PHOTON EMITTERS (pCi/L) Decay of natural and man-made deposits.	0	50	2.000 <small>Highest level found</small>	nd - 2.000	--	11/05/2001
Unregulated Contaminants						
BORON (ppb) Erosion of naturally occurring deposits; Used in detergents and as a water softener; Used in production of glass, cosmetics, pesticides, fire retardants and for leather tanning.	n/a	n/a	24.000 <small>Highest level found</small>	nd - 24.000	--	--
BROMODICHLOROMETHANE [TTHM] (ppb) By-product of drinking water disinfection.	n/a	n/a	5.575	3.600 - 7.500	--	--
BROMOFORM [TTHM] (ppb) By-product of drinking water disinfection.	n/a	n/a	nd	nd	--	--
CHLOROFORM [TTHM] (ppb) Used as a solvent for fats, oils, rubber, resins; A cleansing agent; Found in fire extinguishers.	n/a	n/a	7.150	4.100 - 10.200	--	--
DIBROMOCHLOROMETHANE [TTHM] (ppb) Used as a chemical reagent; An intermediate in organic synthesis.	n/a	n/a	3.375	2.300 - 4.800	--	--
DICHLOROACETIC ACID [HAA] (ppb) By-product of drinking water disinfection.	n/a	n/a	4.300	3.000 - 5.300	--	--
TRICHLOROACETIC ACID [HAA] (ppb) By-product of drinking water disinfection.	n/a	n/a	3.300	2.500 - 3.900	--	--
DIBROMOACETIC ACID [HAA] (ppb) By-product of drinking water disinfection.	n/a	n/a	0.750	nd - 1.800	--	--
SULFATE (ppm) Erosion of naturally occurring deposits.	n/a	n/a	26.700	25.800 - 27.600	--	--
State Regulated Contaminants						
FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	0.959	0.920 - 1.030	--	--
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	n/a	n/a	7.500 <small>Highest level found</small>	7.300 - 7.500	--	--

The Treatment Process



1. Water from Lake Michigan enters the intake crib at depths of 20 to 30 feet.
2. Water enters the purification plant's intake basin through a tunnel beneath the lake bed.
3. Water is filtered through eight traveling screens to catch debris.
4. Water is pumped by low lift pumps up 25 feet for the first chemical treatment.
5. Water flows from the chemical application channels.
6. Water flows through mixing basins to begin the flocculation process.
7. Flocculation water passes into settling basins to sit for four hours allowing floc to settle.
8. Water is filtered through precisely graded sand and gravel performing a "natural polishing."
9. Filtered water flows into clearwells for its final chemical application.
10. From finished water reservoirs water flows to the distribution system.

SOURCE WATER ASSESSMENT SUMMARY

The Illinois EPA implemented a Source Water Assessment Program (SWAP) to assist with watershed protection of public drinking water supplies. The SWAP inventories potential sources of contamination and determines the susceptibility of the source water to contamination. The Illinois EPA has completed the Source Water Assessment Program for our supply.

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.

EDUCATIONAL STATEMENTS REGARDING COMMONLY FOUND DRINKING WATER CONTAMINANTS

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 (1-800-426-4791).

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 (1-800-426-4791).

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 can dissolve naturally occurring minerals and radioactive materials, and pick up substances resulting from the presence of animals or human activity.

Possible contaminants consist of:

- 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 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 may also come from gas stations, urban storm water runoff and septic systems; and
- Radioactive contaminants, which may 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, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.



Message from
Mayor Richard M. Daley



Dear Water Customer,

We are pleased to provide you with the City of Chicago's annual Water Quality Report. It demonstrates that our water is of the highest quality and that we are working harder than ever to protect it, so that it never becomes an endangered resource.

We all need to understand that our water is not limitless, and it is not a waste product. Chicago has a special responsibility, because of our location on one of the Great Lakes, which contain 95% of the nation's fresh surface water supply.

To continue to provide first-rate water, we must be diligent in our conservation efforts and clear about our objectives. That's why the Department of Water Management has initiated a number of new programs like the "Automatic Meter Reading Initiative" and "Interactive Voice Response System" to better serve and inform residents about our water.

Like the air we breathe, water is a vital natural resource and an important part of our quality of life in Chicago. We owe it to all of the people who enjoy and depend on this resource to remain vigilant in our efforts to protect and provide the highest quality possible.

Sincerely,

Mayor

Para obtener el informe de la calidad del agua 2005 en español, por favor llame a nuestro centro de información al numero (312) 747-9090.

WATER: The Pure Facts

- Water constitutes 40% of the reported daily beverage consumption in the United States.
- You can survive about a month without food, but only 5 to 7 days without water.
- The average five-minute shower uses between 15 to 25 gallons of water.
- Each person uses about 100 gallons of water a day at home.
- The average household consumes at least 50% of its water by lawn sprinkling.
- An automatic dishwasher uses approximately 9 to 12 gallons of water while hand washing dishes can use up to 20 gallons.
- You can refill an 8 oz. glass of water approximately 15,000 times for the same cost as a six pack of pop.
- Of all the earth's water, 97% is salt water, 2% is frozen water and only 1% is available for drinking water.
- Water has zero calories and zero sugar, but a good drink of water can reduce hunger. Water helps your body metabolize stored fats, helps maintain proper muscle tone, and helps rid the body of wastes.

The Department of Water Management
Jardine Water Purification Plant
1000 East Ohio Street
Chicago, Illinois 60611

City of Chicago
Richard M. Daley, Mayor



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