



CATCH
CHICAGO
WATER
QUALITY
REPORT

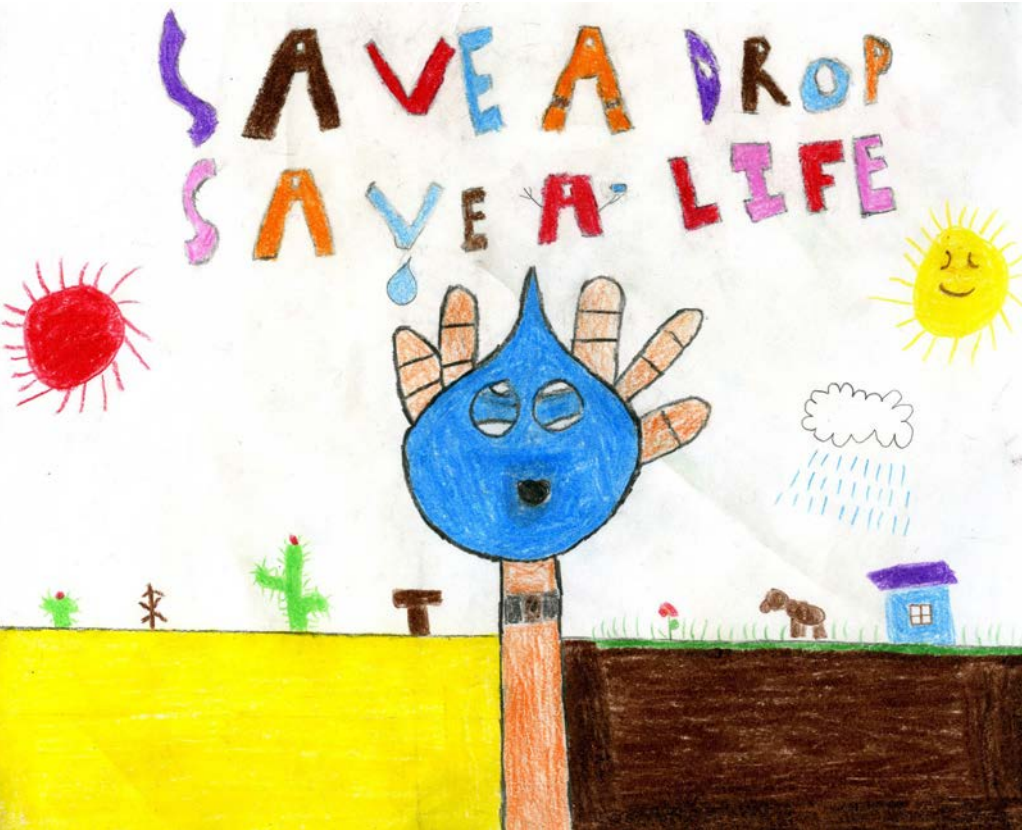


Lori E. Lightfoot, Mayor
City of Chicago



Randy Conner, Commissioner
Department of Water Management

2019



The artwork above was submitted by Jimmy S., Grade 9, Marine Leadership Academy.

CITY OF CHICAGO, DEPARTMENT OF WATER MANAGEMENT (DWM) SOURCE WATER ASSESSMENT SUMMARY FOR THE 2019 CONSUMER CONFIDENCE REPORT (CCR)

This year, as in years past, your tap water met all USEPA and state drinking water health standards. Our system vigilantly safeguards its source water supply. This report summarizes the quality of water that we provided last year, including details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. We are committed to providing you with this information because informed customers are our best allies.

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 determined 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 Sawyer 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 of 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 DWM at 312-742-2406 or by going online at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>

FOR MORE INFORMATION

www.cityofchicago.org/watermanagement

WATER IN THE STREET OR BASEMENT

Call 311

WATER QUALITY QUESTIONS

(312) 744-8190

DEPARTMENT OF FINANCE

WATER BILL QUESTIONS

(312) 744-4426

E-MAIL: water@cityofchicago.org

IEPA'S REGIONAL OFFICES (ILLINOIS)

(847) 608-3131

EPA'S SAFE DRINKING WATER HOTLINE

(800) 426-4791

EPA'S GENERAL INFORMATION LINE

(312) 353-2000

DETECTED CONTAMINANTS

Contaminant (unit of measure) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
MICROBIAL CONTAMINANTS						
TOTAL COLIFORM BACTERIA (% pos/mo) Naturally present in the environment	0	5%	0.4%	N/A	-	-
FECAL COLIFORM AND E. COLI (# pos/mo) Human and animal fecal waste.	0	0	0	N/A	-	-
TURBIDITY (NTU/Lowest Monthly %≤0.3 NTU) Soil runoff.	N/A	TT (Limit: 95%≤0.3NTU)	100% (Lowest Monthly %)	100% - 100%	-	-
TURBIDITY (NTU/Highest Single Measurement) Soil runoff	N/A	TT (Limit: 1 NTU max)	0.14	N/A	-	-
INORGANIC CONTAMINANTS						
BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	2	2	0.0208	0.0195 - 0.0208	-	-
COPPER (ppm) ** Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.	1.3	AL = 1.3	0.091 (90 th percentile)	0 sites exceeding AL	-	6/1/2018- 9/30/2018
LEAD (ppb) ** Corrosion of household plumbing systems; Erosion of natural deposits.	0	AL = 15	9.1 (90 th percentile)	0 sites exceeding AL	-	6/1/2018- 9/30/2018
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.35	0.33 - 0.35	-	-
TOTAL NITRATE & NITRITE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.35	0.33 - 0.35	-	-
DISINFECTANT/DISINFECTION BY-PRODUCTS						
TTHMs [TOTAL TRIHALOMETHANES] (ppb) * By-product of drinking water disinfection.	N/A	80	27.7	12.3 - 36.7	-	-
HAA5 [HALOACETIC ACIDS] (ppb) * By-product of drinking water disinfection.	N/A	60	12.6	5.1 - 15.6	-	-
CHLORINE (as Cl ₂) (ppm) Water additive used to control microbes.	4.0	4.0	1	1 - 1	-	-
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 IEPA.						
UNREGULATED CONTAMINANTS						
SULFATE (ppm) Erosion of naturally occurring deposits.	N/A	N/A	26.7	25.8 - 26.7	-	-
SODIUM (ppm) Erosion of naturally occurring deposits; Used in water softener regeneration.	N/A	N/A	10.2	8.73 - 10.2	-	-
STATE REGULATED CONTAMINANTS						
FLUORIDE (ppm) Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. Fluoride results are based on monthly readings reported to IDPH.	4	4	0.79	0.62 - 0.79	-	-
RADIOACTIVE CONTAMINANTS						
COMBINED RADIUM (226/228) (pCi/L) ** Decay of natural and man-made deposits.	0	5	0.84	0.5-0.84	-	2/11/2014
GROSS ALPHA excluding radon and uranium (pCi/L) ** Erosion of natural deposits.	0	15	6.6	6.1-6.6	-	2/11/2014

Unregulated Contaminant Monitoring Rule 4 (UCMR 4)

Unregulated contaminants are those for which an MCL has not been established by either state or federal regulations, nor has mandatory health effects language been set. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2019, Chicago participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4), monitoring for a range of contaminants, including pesticides, semi-volatile chemicals, metals, indicators and three brominated haloacetic acid groups. The table below lists the unregulated contaminants that were detected.

Contaminants (Units)	Sample Year	Average Level Found	Range of Detections
Haloacetic Acids (HAA9) (ppb)	2019	20.6	16.5 – 25.4
Haloacetic Acids (HAA5) (ppb)	2019	12.1	8.54 – 17.9
Haloacetic Acids (HAA6Br) (ppb)	2019	9.45	4.78 – 11.5

Note: TTHM, HAA5, and Chlorine are for the Chicago Distribution System.

*Data expressed as LRAA – Locational Running Annual Average (See Definition of terms for Details)

**The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old. If any of these contaminants were detected the last time they were sampled for, they are included in the table along with the date that the detection occurred. Compliance monitoring for lead and copper is conducted every 3 years. Radiochemical contaminant monitoring is conducted every 6 years.

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 the 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.

WATER QUALITY DATA TABLE FOOTNOTES

TURBIDITY: Turbidity is a measure of the cloudiness of the 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.

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 been set. 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.

FLUORIDE: Fluoride is added to the water supply to help promote strong teeth. The IL Department of Public Health has recommended an optimal fluoride level of 0.7 mg/L, with a range of 0.6 mg/L to 0.8 mg/L.

SODIUM: There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials

who are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about the level of sodium in the water.

LEAD: 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 lead service lines and home plumbing. DWM 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 over six hours, you can minimize the potential for lead exposure by flushing your tap for a minimum of 5 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 by calling 311 or going to www.chicagowaterquality.org. 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>.

Unit of Measurement

ppm: Parts per million, or milligrams per liter (mg/L)

ppb: Parts per billion, or micrograms per liter (µg/L)

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

% ≤ 0.3 NTU: Percent samples less than or equal to 0.3 NTU

pCi/L: Picocuries per liter, used to measure radioactivity

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 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 a drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Highest Level Detected: This column represents the highest single sample reading of a contaminant of all the samples collected in this calendar year.

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 that triggers treatment or other required actions by the water supply.

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.

Locational Running Annual Average (LRAA): The average of 4 consecutive quarterly results at each monitored sample location. The LRAA should not exceed 80µg/L for TTHM and 60 µg/L for HAA5.

2019 VOLUNTARY MONITORING

DWM monitors for Cryptosporidium, Giardia and E. coli in its source water as part of its water quality program. Cryptosporidium has not been detected in these samples, but Giardia was detected in September 2010 in one raw lake water sample collected. Treatment processes have been optimized to provide effective removal of Cryptosporidium and Giardia from the source water. By maintaining low turbidity through the removal of particles from the water, the possibility of such organisms getting into the drinking water system is greatly reduced.

In 2019, DWM has also continued monitoring for hexavalent chromium, also known as chromium-6. USEPA has not yet established a standard for chromium-6, a contaminant of concern which has both natural and industrial sources. Chromium-6 sampling data are posted at:

http://www.chicago.gov/city/en/depts/water/supp_info/water_quality_resultsandreports.html

CROSS-CONNECTION CONTROL SURVEY

The City of Chicago Department of Water Management is required by the Illinois Environmental Protection Agency (IEPA) to survey all water services connected to our public drinking water supply. This survey will help us prevent accidental contamination of our drinking water system by determining whether a cross-connection may exist at your home or business. A cross-connection is an unprotected or improper connection to the public drinking water

system that may cause contamination or pollution to enter the system.

Please fill out the survey online at www.chicagoccr.org. Your answers are for the Department of Water Management's use only! Please be assured this survey is not an indication of any problems, but is required by the IEPA. Thank you for your cooperation.

LEARN MORE ABOUT CHICAGO'S PLAN FOR REOPENING



We continue to mobilize every resource at our disposal and collaborate with national, state and local partners to continue our comprehensive and coordinated response to COVID-19. Please check chicago.gov/reopening for our reopening plan and chicago.gov/coronavirus for public health guidance. Be Safe Chicago.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

2019 VIOLATION SUMMARY TABLE

The City of Chicago Department of Water Management had no reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations recorded during 2019. However, our water system had one drinking water monitoring violation. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

We are required to monitor your drinking water for specific contaminants, including Synthetic Organic Chemicals (SOCs), on a regular basis. Results of regular monitoring are an indicator of whether or not we are treating our drinking water effectively enough to meet health standards.

During 2019, we did not complete all SOC testing within the required time period and therefore we cannot be sure of the quality of our drinking water during that time. SOC testing was completed shortly after the required time period, however, and was below detection limits as usual.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were taken.

Contaminant	Synthetic Organic Chemicals (SOCs)*
Required sampling frequency	Annually
Number of samples taken	6 water samples are tested for all the SOCS listed below
When all samples should have been taken	by 7/1/2019
When samples were taken	6/11/2019 – Jardine Water Purification Plant 6/11/2019, 7/22/2019 & 9/3/2019 – Sawyer Water Purification Plant

What does this mean?

SOC samples taken in 2019 and previous years were all below detection limits. However, some people who drink water containing SOCs in excess of any of the individual MCLs over many years could have problems with such things as their blood, nervous system, skin, immune system, kidneys, liver, stomach, reproductive system, or thyroid, and may have an increased risk of getting cancer. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened?

On June 11, 2019, a water sample was collected for SOC analysis from both the Jardine Water Purification Plant (JWPP) and the Sawyer Purification Plant (SWPP). The sample was packed into coolers with ice and overnight shipped to the Illinois Environmental Protection Agency laboratory in Springfield, IL. SOC analysis methods require the sample to be below 6 C to be analyzed. The samples were not shipped overnight as promised by the delivery service, however, and due to the warm outdoor temperatures, the sample from SWPP was too warm to be analyzed when received by the laboratory. Another sample was then taken from SWPP, packed on ice, and mailed via delivery service to the laboratory in Springfield, IL. The temperature of the sample was cool enough to analyze all but one of the SOCs, Endothall. By the time a third sample could be taken for Endothall from SWPP on September 3, 2019 and driven directly to the laboratory in Springfield to avoid any issues with a delivery service, the deadline of July 1, 2019 had passed. The resulting SOC samples were below detection limits and thus meeting drinking water requirements, as has historically been the case.

To avoid this temperature issue in future SOC samples, the sample collector has been trained to cool the samples in a refrigerator before packing them on ice. In addition, SOC samples taken during warm weather will be directly driven to Springfield, IL in an air-conditioned vehicle.

*Synthetic Organic Chemicals is a contaminant group consisting of: 2,4,5-TP (Silvex); 2,4-D; Alachlor; Aldrin; Atrazine; Benzo(a)pyrene; Carbofuran; Chlordane; Dalapon; Di(2-ethylhexyl)-adipate; Di(2-ethylhexyl)-phthalate; Dibromochloropropane (DBCP); Dieldrin; Dinoseb; Diquat; Endothall; Endrin; Ethylene dibromide (EDB); Heptachlor; Heptachlor epoxide; Hexachlorobenzene; Hexachlorocyclo-pentadiene; Lindane; Methoxychlor; Oxamyl (Vydate); PCBs (Polychlorinated biphenyls); Pentachlorophenol; Picloram; Simazine; Toxaphene

FOR MORE INFORMATION, PLEASE CONTACT

Andrea Putz, Deputy Commissioner for the Bureau of Water Supply
At 312-742-2406

Chicago Department of Water Management
Bureau of Water Supply
1000 East Ohio Street • Chicago, IL 60611
Attn: Andrea Putz

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by: The City of Chicago, Department of Water Management Water System ID# IL0316000



Message from **Mayor Lori E. Lightfoot**

Dear Resident:

Now, more than ever, it is vitally important that all Chicago residents have access to high-quality water. Frequent hand-washing is among the most effective ways individuals can protect themselves and their families from COVID-19.

As this report outlines, Chicago's tap water meets or exceeds all standards set by the U.S. Environmental Protection Agency for safe, clean drinking water. This report, issued annually, details information on only the results above detection limits for annual certified testing of Chicago's drinking water. Included is a glossary of terms so that you understand exactly what the findings mean.

The City of Chicago Department of Water Management (DWM) continues to deliver almost one billion gallons daily of clean drinking water to residents of Chicago and the surrounding suburbs. In order to minimize any contaminants- including lead- in our water, DWM keeps our water clean by:

- Performing over 600,000 analyses per year of tap water at every step in the treatment process and adjusting treatment protocols as necessary;
 - Using corrosion control in our water to minimize the risk of contaminants leaching from plumbing;
 - Replacing miles of water and sewer mains to increase reliability and efficiency;
 - Distributing complete instructions for flushing water through plumbing to residents and businesses whenever there is any water infrastructure work being done in the vicinity;
- and
- Offering free residential water testing by a certified laboratory.

I will continue to make it a priority of my administration to protect our exceptional water source, Lake Michigan, from polluters and invasive species and to create a strong, efficient water system that provides safe, clean drinking water for every Chicago resident.

A handwritten signature in black ink that reads "Lori E. Lightfoot". The signature is fluid and cursive, written in a professional style.

Mayor Lori E. Lightfoot

Este informe contiene información muy importante.
Tradúscalo ó hable con alguien que lo entienda bien.



**ONE CITY
ONE VOICE
TAKE THE CENSUS**

**MAKE
YOURSELF
COUNT.**

My2020census.gov

**844-330-2020 (English)
844-468-2020 (Spanish)**

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

**City of Chicago
Lori E. Lightfoot, Mayor**



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