



VILLAGE OF BROOKFIELD

**Annual Water Quality Report
2023**

**Consumer Confidence Report
June 2024**



VILLAGE OF BROOKFIELD

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This water quality report was prepared to inform you, the consumer, about the quality of the water and the services that the Village of Brookfield, Public Works Department - Utilities Division, provides you with daily. The Consumer Confidence Report is informational, and no action is required.

The Environmental Protection Agency (EPA) requires that this report is completed and accessible to residents. It is in accordance with the 1996 amendments to the safe drinking water act. This report will summarize the water quality we provided in the calendar year of 2023. It includes information about where your water comes from, what it contains, and how it compares to the USEPA (United States Environmental Protection Agency) and IEPA (Illinois Environmental Protection Agency) standards.

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien. En español, llame at 708-485-7344.

WATER UTILITY INFORMATION

If you have any questions about this report or concerns about your water system, call Public Works at 708-485-2540. If you, our valued customer, would like to learn more about the water system, please feel free to attend any of the regularly scheduled Village Board meetings. The Village Board meetings are held on the second and fourth Mondays of the month at 6:30 pm in the Village Hall (8820 Brookfield Ave.).

MISSION STATEMENT

Information in this report describes water consumed during the 2023 calendar year. **We are pleased to report that the Village-owned water system met all USEPA and State Drinking Water Health Standards in 2023.** The Village of Brookfield is dedicated to delivering our customers a sufficient supply of safe, clean, and quality water.

HISTORY

Brookfield (formerly Grossdale) was incorporated in 1889. The Village is in Cook County, Illinois, 13 miles west of downtown Chicago, and has a population of 18,776 residents (United States Census Bureau).

The Village of Brookfield receives Lake Michigan water from the Brookfield-North Riverside Water Commission. The entry point or metering station is located on Brookfield Avenue. The Brookfield Utilities Division maintains 63 miles of water main, 788 fire hydrants, and over 6,700 water services and meters. In the calendar year 2023, the Village purchased 670,553,000 gallons of water from the Brookfield-North Riverside Water Commission. The Village distributed a daily average of 1.837 million gallons.

SOURCE OF WATER SUPPLY

The Village of Brookfield purchases its water from the Brookfield-North Riverside Water Commission. The Brookfield-North Riverside Water Commission receives the treated water from the City of Chicago Department of Water Management. The City of Chicago utilizes Lake Michigan as its water source via two water treatment plants. The Jardine Water Purification Plant serves the city's northern areas and suburbs. In contrast, the Sawyer (formerly South) Water Purification Plant serves the city's southern regions and suburbs. Lake Michigan is the only Great Lake 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 the third-largest by area.

SOURCE WATER ASSESSMENT

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.

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 or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from presence of animals or from human activity. The Illinois EPA considers all surface water sources of community water supply 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 crib structures may 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 stormwater 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 312-742-2406 by going online at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The Illinois EPA has completed the source water assessment for our supply. If you want a copy of this information, please stop by Village Hall or call our Water Operator at 708-485-2540. To view a summary version of the completed Source Water Assessments, including the Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>

EDUCATIONAL STATEMENTS REGARDING COMMONLY FOUND DRINKING WATER CONTAMINANTS FOR THE 2023 CONSUMER CONFIDENCE REPORT

The City of Chicago's Department of Water Management, the Brookfield-North riverside Water Commission, and the Village of Brookfield Department of Public Works Utility Division routinely monitor for contaminants in your drinking water according to Federal and State Laws. The Village of Brookfield Department of Public Works Utility Division collects twenty bacteriological samples monthly. The attached table shows the results of the Village's monitoring from January 1, 2023, to December 31, 2023.

Drinking water, including bottled drinking 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).

The Village of Brookfield is pleased to report that our drinking water is safe and meets all federal and state requirements.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as those with cancer undergoing chemotherapy, 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 healthcare 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 (1-800-426-4791).

If present, 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 Village of Brookfield is responsible for providing high-quality drinking water but cannot control the various materials used in the plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap water for 5 minutes before using water for drinking or cooking. 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>

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 land's surface 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 human activity. Contaminants that may be 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 can 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

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which 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.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

2023 -CITY OF CHICAGO VOLUNTARY MONITORING

The City of Chicago monitors Cryptosporidium, Giardia & E coli in source water as part of its water quality program. No Cryptosporidium or Giardia was detected in source water samples in 2023. Treatment processes have been optimized to provide effective barriers for removing Cryptosporidium & Giardia from the source water. Maintaining low turbidity by removing particles from water greatly reduces the possibility of organisms entering the drinking water system.

In 2023, the City of Chicago continued monitoring for hexavalent chromium, also known as chromium-6. USEPA still needs to establish a standard for chromium-6, a contaminant of concern with both natural and industrial sources. Chromium-6 sampling data are posted at:

https://www.cityofchicago.org/city/en/depts/water/supp_info/water_quality_resultsandreports/city_of_chicago_emergincontaminantstudy.html

For more information, please contact
Patrick Schwer
At 312-744-8190

Chicago Department of Water Management
1000 East Chicago, IL 60611
Attn: Patrick Schwer

Village of Brookfield Violations – No Violations were recorded in 2023

Fill a glass with tap water and sometimes it looks cloudy or “milky.” Wait a few seconds and the water starts to clear. It usually happens more during the cold weather months. It is a function of water temperature, water pressure and the solubility of air in the water. The water is safe and meets the required testing standards. The United States Geological Survey has additional information on this phenomenon on their website. To find more information about this and much more visit the USGS at <http://water.usgs.gov/edu/qa-chemical-cloudy.html>



WATER QUALITY TEST RESULTS

Definition of Terms / Abbreviations and Footnotes: The following tables contain scientific terms and measures some of which may require explanation.

Action level (AL)	Action Level or the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Action level goal (ALG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
AVG	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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.
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 - 1.2 mg/l.
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 may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).
Highest Level Detected	This column represents an average of sample result data collected during the CCR calendar year. In some cases, it may represent single sample if only one sample was collected.
Level 1 Assessment	A level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment	A level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
MCL	Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCL'S are set as close to the MCLG's as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal, or 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.
MRDL	Maximum Residual Disinfectant Level – 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.
MRDLG	Maximum Residual Disinfectant Level Goal – 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.
MREM	Millirems per year (a measure of radiation absorbed by the body).
N/A	Not applicable.
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 (a measure of radioactivity).
ppb	Parts per billion, or micrograms per liter (ug/l) or one ounce in 7,350,000 gallons of water.
ppm	Parts per million, or milligrams per liter (mg/l) or one ounce in 7,350 gallons of water.
Range of Detection	This column represents a range of individual sample results, from lowest to highest that were collected during the CCR calendar year
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 the level is greater than 20mg/l, and you are on a sodium-restricted diet, you should consult a physician
Total Coliform Bacteria	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were found in more sample than allowed, and this was a warning of potential problems.
Treatment Technique or TT	Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.
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 these contaminants has not yet been established by either state or federal regulations, nor has mandatory health effects language. The purpose for monitoring these contaminants is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water, and whether future regulation is warranted.
Haloacetic Acids & Total Trihalomethanes	Not all samples 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 occur in the future

2023 City of Chicago Water Quality Data

Regulated Contaminants Detected

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level Found	Range of Detection	Date of Violations	Sample Date:
<u>Turbidity Data</u>						
TURBIDITY (% < 0.3 NTU) <i>Soil runoff, Lowest monthly percent meeting limit.</i>	N/A	TT (Limit:95%< 0.3 NTU)	Lowest Monthly % 100%	100% - 100%	N	2023
TURBIDITY (NTU) <i>Soil runoff. Highest single measurement.</i>	N/A	TT (Limit 1 NTU)	0.25	N/A	N	2023
TOTAL COLIFORM (% POS/MO) <i>Naturally present in the environment.</i>	0	5%	0.4%	N/A	N	2023
FECAL COLIFORM AND E. COLI (# pos/mo) <i>Human and animal fecal waste.</i>	0	0	0	N/A	N	2023
<u>Inorganic Contaminants</u>						
BARIUM (ppm) <i>Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits.</i>	2	2	0.0195	0.0192 - 0.0195	N	2023
NITRATE (AS NITROGEN) (ppm) <i>Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.</i>	10	10	0.33	0.29 – 0.33	N	2023
TOTAL NITRATE & NITRATE (AS NITROGEN) (ppm) <i>Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.</i>	10	10	0.33	0.29 - 0.33	N	2023
<u>Radioactive Contaminants</u>						
Combined Radium (226/228) (pCi/l) <i>Decay of natural and man-made deposits.</i>	0	5	0.95	0.83 – 0.95	N	2/04/2020
GROSS ALPHA (excluding radon and uranium) <i>Decay of natural and man-made deposits.</i>	0	15	3.1	2.8 – 3.1	N	2/04/2020
<u>Unregulated Contaminates</u>	MCLG	MCL	Highest Detected	Range of Detection		
Sulfate(ppm) <i>Erosion of naturally occurring deposits.</i>	N/A	N/A	27.8	25.0 - 27.8	N	2023
SODIUM (ppm) <i>Erosion of naturally occurring deposits: Used as water softener.</i>	N/A	N/A	8.71	8.43 – 8.71	N	2023
<u>State Regulated Contaminates</u>	MCLG	MCL	Highest Detected	Range of Detection		
FLOURIDE (ppm) <i>Water additive which promotes strong teeth.</i>	4	4	0.74	0.66 - 0.74	N	2023

2023 Village of Brookfield Water Quality Data

Regulated Contaminants Detected

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level Found	Range of Detection	Violations	Collection Date
<u>Disinfection and Disinfection By-Products</u>						
Chlorine (ppm) <i>Water additive used to control microbes.</i>	4	4	1.04	0.65 – 1.04	N	2/23/2023
Haloacetic Acids HAA5 (ppb) <i>By-product of drinking water disinfection.</i>	None	60	18	8.94 – 27.3	N	2023
Total Trihalomethanes TTHM (ppb) <i>By-product of drinking water disinfection.</i>	None	80	37	21.03 – 56.6	N	2023
<u>Lead and Copper</u>						
	MCLG	Action Level	90 th Percentile	# of sites over AL	Violations	Collection Date
Copper (ppb) <i>Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.</i>	1.3	1.3	0.041	0	N	2023
Lead (ppb) <i>Corrosion of household plumbing systems; Erosion of natural deposits.</i>	0	15	6.98	0	N	2023

2023 Brookfield-North Riverside Water Commission Water Quality Data

Regulated Contaminants Detected

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Level Found	Range of Detection	Violations	Collection Date
<u>Disinfection and Disinfection By-Products</u>						
Chlorine (ppm) <i>Water additive used to control microbes</i>	4	4	1.2	1.04 – 1.3	N	12/31/2023
Haloacetic Acids HAA5 (ppb) <i>By-product of drinking water disinfection</i>	None	60	27	25.2 – 26.9	N	2023
Total Trihalomethanes TTHM (ppb) <i>By-product of drinking water disinfection</i>	None	80	29.8	26.9 – 27.8	N	2023

Brookfield-North Riverside Water Commission Violations – No Violations were recorded in 2023!

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please contact Vincent Smith at 708-485-2540.

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. To view a summary version of the completed Source water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation / recommendation of Source Water Protection Efforts, you may access the Illinois EPA Website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>