

Village of Posen Water Supply System

Consumer Confidence Report 2022

Annual Drinking Water Quality Report
For the period of January 1 to December 31, 2021

About this Report

This report is intended to provide you with important information about your drinking water and the efforts made by the Posen water system to provide safe drinking water. For more information regarding this report contact: Tom Nagel, Village of Posen water Operator.

If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings which are held the second and fourth Tuesday of the month at the Village Hall, 2440 W. Walter Zimny Dr., Posen, IL – Committee Meeting at 6:30 p.m. and Village Board Meeting at 7:00 p.m.

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

Where Does My Water Come From?

The source of drinking water for the Village of Posen is Lake Michigan. The Village of Posen purchases water from the City of Harvey and the City of Harvey purchases water from the City of Chicago. The City of Chicago takes water from Lake Michigan and transfers it to 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. Both Plants have two intakes that draw water from the Lake: one approximately 2 miles offshore, and one “shore” intake. The offshore intakes are between 32-37 feet in depth while the shore intakes are between 13-19 feet in depth. 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.

SOURCE WATER INFORMATION

Source Water Name	Type of Water	Report Status	Location
CC 01 Pumping Station	FF IL0311110 TP01: LAKE SW	Active	14900 Rockwell

Contaminants that may be present in source water include:

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 dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances 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 can 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 can also come from gas stations, urban storm water runoff, and septic systems; and
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Consumer Information

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

In order to ensure that tap water is safe to drink, EPA 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as person 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. 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 (800-426-4791).

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. We 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 2 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 <http://www.epa.gov/safewater/lead>.

Village of Posen 2021 Water Quality Data 2021 Regulated Contaminants Detected

Water Quality Definitions for Test Results

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 or (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 or 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 or MRDL: The highest level of a 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 2016.

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.

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

ND: Contaminant Not Detected at or above the reporting or testing limit. **N/A:** Not Applicable

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

- ppb: micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water.
- na: not applicable
- avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- ppm: milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.

Village of Posen 2021 Water Quality Test Results

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contamination
Chlorine	12/31/21	1	0.5 – 1.5	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2021	15	10 – 18.29	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2021	35	18.11 – 54.2	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	99 th Percentile	# Sites Over AL	Units	Violation	Likely Source Of Contamination
Lead	09/22/20	0	15	11.6	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	1		0	N	Naturally present in the environment

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take zero corrective actions and we completed zero of these actions due to the fact that both the upstream and downstream resampling results were negative.

2021 Violation Summary Table

Lead and Copper Rule				
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.				
Violation	Violation Begin	Violation End	Violation Explanation	Violation Correction
Lead Consumer Notice (LCR)	12/30/20	02/02/21	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.	On 02/02/21, we mailed in the results to sample collection sites.
Coliform Bacteria	09/01/21	09/31/21	We failed to properly pass our coliform results at Walgreen's on 09/14/21 due to a closed valve near the test site, not allowing a full flow to the location.	On 09/16/21, we reopened our water main valves and flushed hydrants nearby to retest. This resulted in a satisfactory test result.
Coliform Bacteria	10/01/21	10/31/21	We failed to properly pass our coliform results at EHC on 10/12/21 due to improper cleaning of the outside spigot at the test site, resulting in a contaminated sample.	On 10/14/21, we properly cleaned the outdoor spigot at the test site for a retest, which satisfied the test result.

2021 Water Quality Data
 DATA TABULATED BY CHICAGO DEPARTMENT OF WATER MANAGEMENT
 0316000 Chicago

Detected Contaminants

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
Turbidity Data TURBIDITY (NTU/Lowest Monthly % ≤ 0.3 NTU) Soil runoff.	N/A	TT (Limit: 95% ≤ 0.3 NTU)	(Lowest Monthly %) 100%	100% - 100%		
TURBIDITY (NTU/Highest Single Measurement) Soil runoff.	N/A	TT (Limit 1 NTU)	0.20	N/A		
Inorganic Contaminants BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries. Erosion of natural deposits.	2	2	0.0203	0.0200-0.0203		
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.28	0.28 - 0.28		
TOTAL NITRATE & NITRITE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	10	10	0.28	0.28 - 0.28		
Total Organic Carbon TOC (total organic carbon) The percentage of TOC removal was measured each month and the system met all TOC removal requirements set by IEPA.	N/A	N/A	N/A	N/A		
Unregulated Contaminants SULFATE (ppm) Erosion of naturally occurring deposits.	N/A	N/A	27.4	26.9 - 27.4		
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	N/A	N/A	9.99	9.79 - 9.99		
State Regulated Contaminants FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	0.75	0.65 - 0.75		
Radioactive Contaminants COMBINED RADIUM 226/228 (pCi/L) Decay of natural and man-made deposits.	0	5	0.95	0.83 - 0.95		2/4/2020
GROSS ALPHA excluding radon and uranium (pCi/L) Decay of natural and man-made deposits.	0	15	3.1	2.8 - 3.1		2/4/2020

Units of Measurement

ppm: Parts per million, or milligrams per liter
 ppb: Parts per billion, or micrograms per liter
 NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water
 % ≤ 0.3 NTU: Percent of samples less than or equal to 0.3 NTU
 pCi/L: Picocuries per liter, used to measure radioactivity

Water Quality Data Table Footnotes

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 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 level of 0.7 mg/L with a range of 0.6 mg/L to 0.8 mg/L.

Sodium: There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials who have concerns 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.

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.

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.

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 other than 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 the City of Chicago, Department of Water Management at 312-742-2406 or by going online at <http://dataservices.epa.illinois.gov/swap/factsheet.aspx>.

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4)

In compliance with UCMR4, samples were collected at Chicago Water System's entry points to the distribution system (EPTDS), also known as finished water, and analyzed for all contaminant groups except for Haloacetic Acids (HAAs), which were sampled from the distribution system. All the contaminant groups tested in finished water were below the minimum reporting levels specified in the test method under UCMR 4. Samples for HAA indicators (Total Organic Carbon and Bromide) were collected at two source water influent points for the system. For Bromide, test results ranged from 28.2 to 35.3 ppb, and for TOC, test results ranged from 1.79 to 1.80 ppm.

Illinois EPA's Sampling of PER- and Polyfluoroalkyl Substances (PFAS)

The Illinois EPA collected finished water samples from Chicago's Water System on 10/29/2020 and analyzed the samples for a total of 18 PFAS contaminants. In its notification to Chicago, the Illinois EPA stated that these contaminants were not present in Chicago's drinking water at concentrations greater than or equal to the minimum reporting levels.

2021 VOLUNTARY MONITORING

The City of Chicago monitors for Cryptosporidium, Giardia and E. coli in its source water as part of its water quality program. No Cryptosporidium or giardia was detected in source water samples collected in 2021. 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 2021, the City of Chicago 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. Please address any questions or concerns to DWM's Water Quality Division at 312-744-8190. Data reports on the monitoring program for chromium-6 are posted on the City's website which can be accessed at the following address below:

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

For more information, please contact
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