

Village of Posen Water Supply System

Consumer Confidence Report 2019

Annual Drinking Water Quality Report
For the period of January 1 to December 31, 2018

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 2nd and 4th 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 informacion muy importante sobre el agua que usted bebe. Traduzcalo 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 EPAs 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 2018 Water Quality Data 2018 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 2018 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	12/31/2018	0.9	0.6 – 1.5	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2018	20	17.4 – 33.1	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	28	26.7 – 62.9	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source Of Contamination
Lead	8/29/2017	0	15	5.68	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

2018 Violation Summary Table

We are pleased to announce that no monitoring, reporting, treatment technique, maximum residual disinfectant level, or maximum contaminant level violations were recorded during 2018.

DATA TABULATED BY CHICAGO DEPARTMENT OF WATER MANAGEMENT
2018 Water Quality Data
0316000 Chicago

Detected Contaminants

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Detections	Violation	Date of Sample
<i>Turbidity Data</i> TURBIDITY (NTU/Lowest Monthly % \leq 0.3 NTU) Soil runoff.	N/A	TT (Limit 0.3NTU)	(Lowest Monthly %) 100%	100% - 100%		
TURBIDITY (NTU/Highest Single Measurement) Soil runoff.	N/A	TT (Limit 1 NTU))	0.19	N/A		
<i>Inorganic Contaminants</i> BARIUM (ppm) Discharge of drilling wastes; Discharge from metal refineries. Erosion of natural deposits.	2	2	0.0214	0.0203 – 0.0214		
NITRATE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage: Erosion of natural deposits.	10	10	0.42	0.31 – 0.42		
TOTAL NITRATE & NITRITE (AS NITROGEN) (ppm) Runoff from fertilizer use; Leaching from septic tanks, sewage: Erosion of natural deposits.	10	10	0.42	0.31 – 0.42		
<i>Total Organic Carbon</i> 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		
<i>Unregulated Contaminants</i> SULFATE (ppm) Erosion of naturally occurring deposits.	N/A	N/A	27.6	26.3 – 27.6		
SODIUM (ppm) Erosion of naturally occurring deposits; Used as water softener.	N/A	N/A	8.89	8.14 – 8.89		
<i>State Regulated Contaminants</i> FLUORIDE (ppm) Water additive which promotes strong teeth.	4	4	0.86	0.64 – 0.86		
<i>Radioactive Contaminants</i> COMBINED RADIUM 226/228 (pCi/L) Decay of natural and man-made deposits.	0	5	0.84	0.50 - 0.84		2/11/2014
GROSS ALPHA excluding radon and uranium (pCi/L) Decay of natural and man-made deposits.	0	15	6.6	6.1 - 6.6		2/11/2014

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
% \leq 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 not 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 SWAP for our supply. Further information on our community water supply's SWAP is available by calling the City of Chicago, Department of Water Management at 312-744-6635

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 the City of Chicago, Department of Water Management at 312-744-6635.

2018 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 organisms 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. Also, in compliance with Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) Round 2, the City of Chicago has started the 24 months long monitoring program in April 2015, collecting samples from its source water once per month to monitor for Cryptosporidium, Giardia, E. coli and turbidity. Cryptosporidium and Giardia were not detected in these samples.

In 2018, CDWM 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 312-742-7499. 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_emerigincontaminantstudy.htm

2018 Violation Summary Table

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