Annual Drinking Water Quality Report for Calendar Year 2023

Lake County Public Water District

Facility #IL0975790

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. This report includes drinking water facts, information on violations (if applicable), and contaminants detected in your drinking water supply during calendar year 2023. Each year, we will provide you a new report. If you need help understanding this report or have general questions, please contact the person listed below.

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

Before we begin listing our unique water quality characteristics, here are some important facts you should know to help have a basic understanding of drinking water in general.

Sources of Drinking Water

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.

The Lake County Public Water District is located on the East side of the City of Zion. Lake Michigan (surface water) serves as the primary source of drinking water for the Lake County Public Water District's customers, which are the City of Zion, Village of Winthrop Harbor, and the State of Illinois, Department of Natural Resources..

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.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Other Facts about Drinking Water

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 at (800) 426-4791.

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.

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 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. Lake County Public Water District 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 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*.

A Source Water Assessment summary is included below for your convenience

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 monthly scheduled board meetings. Regularly scheduled meetings are located at our website http://lcpwd.com. 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 the Lake County Public Water District at (847) 746-2052 or to view a summary version please go to http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl. Outlined below is information related to the source water assessment.

Susceptibility is defined as the likelihood for the source water(s) of a public water system to be contaminated at concentrations that would pose a concern. 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 contaminates to migrate into the intake with no protection only dilution, which is the reason for mandatory treatment for all surface water supplies in Illinois.

Lake County Public Water District's intake has a moderate sensitivity and therefore has greater protection from shoreline contaminates due to mixing and dilution. While the shoreline contaminates are not perceived as an immediate threat, the combination of the land use, proximity to North Point Marina and storm water discharge from Kellogg Ravine adds to the susceptibility of Lake County Public Water District's intake.

Also the proximity of Illinois Beach State Park adds to the protection of the intake by acting as a natural buffer from shoreline contaminates. The best way to ensure a safe source of drinking water for a water supply is to develop a program designed to protect the source water against potential contamination on the local level. Since the predominant land use within Illinois' boundary of Lake Michigan watershed is urban, a majority of watershed protection activities in this document are aimed at this purpose.

Here are a few definitions and scientific terms which will help you understand the information in the contaminant detection tables.

ND	Not detectable at testing limits
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Avg	Regulatory compliance with some MCLs is based on running annual average of monthly samples.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: 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.
MRDL	Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.
MRDLG	Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.
N/A	Not Applicable
NTU	Nephelometric Turbidity Units
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.
ppt	Parts per trillion, or nanograms per liter
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Coliform Bacteria	**MCLG**	**Total Coliform MCL**	**Highest Number of Positive Samples**	**Fecal Coliform or *E. coli* MCL**	**Total No. of Positive E. coli or Fecal Coliform Samples**	**Violation**	**Likely Source of Contamination**
	0	MCL: presence of coliform bacteria in > 5% of monthly samples (for systems that collect 40 or more samples/month). > 1 positive monthly sample (for systems that collect < 40 samples/month).	0	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive	0	N	Naturally present in the environment

Disinfectants & Disinfection Byproducts	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)[1]	8/7/2023	17.3	17.3 – 17.3	No goal for the total	60	ppb	N	By-product of drinking water chlorination
[1]not all sample 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 should occur in the future.								
Total Trihalomethanes (THHm)[2]	8/7/2023	31.4	31.4 – 31.4	No goal for the total	80	ppb	N	By-product of drinking water chlorination
[2]not all sample 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 should occur in the future.								

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	6/27/2023	< 1.0	< 1.0 – < 1.0	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards, runoff from glass and electronics production wastes
Asbestos	3/11/2021	0	0 - 0	7	7	micron	N	Decay of asbestos cement water mains; Erosion of natural deposits
Barium	6/27/2023	.020	.020 - .020	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	Monthly	0.730	0.614 – 0.730	4	4	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen]	6/5/2023	0.33	0.33 - 0.33	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	6/27/2023	< 1.0	< 1.0 – < 1.0	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Sodium[3]	6/27/2023	8.2	8.2 – 8.2			ppm	N	Erosion from naturally occurring deposits; Used in water softener regeneration
[3]Monitoring of Sodium 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.								
Zinc[4]	6/27/2023	< .006	< .006 - < .006	5	5	Ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal.
[4]This contaminant "zinc "is not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more								

Radiological Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium Radium 226 & Radium 228[5]	*2/3/2022	1.25	1.25 – 1.25	0	5	pCi/L	N	Erosion of natural deposits
[5]Some contaminants are sampled less frequently than once a year; As a result, not all contaminants were sampled for during the CCR calendar year. 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.								
Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.								

Synthetic Organic Contaminants (pesticides and herbicides)	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Di(2-ethylhexyl) phthalate[6]	5/2/2022	< 1.8	< 1.8 – < 1.8	0	6	ppb	N	Discharge from rubber and chemical factories
[6]This contaminant is not currently regulated by the USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1,000 or more.								

Turbidity				
Turbidity is a measurement 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.				
	Limit (Treatment Technique)	**Level Detected**	**Violation**	**Likely Source of Contamination**
Lowest Monthly % Meeting Limit	0.3 NTU	100%	N	Soil Runoff
Highest Single Measurement	1 NTU	**.20**	**N**	Soil Runoff

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 IEPA, unless a TOC violation is noted in the violation section.

Contaminants Pfas Analyte (Acronym)	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**Guidance Level**	**Units**	**Violation**	**Likely source of Contamination**
Perfluorooctanesulfonic Acid (PFOS)[7]	2/28/2022	2.1	2.1 – 2.1	14ng/L (0.00014mg/l)	Ng/l	N	Unknown sources in Lake Michigan
Perfluorooctanoic Acid (PFOA)	2/28/2022	2.5	2.5 – 2.5	2ng/L (0.000002mg/l)	Ng/l	N	
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. Guidance LeveL is not a regulatory limit but is a benchmark used by Illinois EPA for comparing with sampling results. *In November 2020 through February 2022, the District was sampled by Illinois EPA as part of the State of Illinois PFAS statewide investigation. Illinois EPA advised the District that results from this sampling indicated that PFAS was detected in our drinking water below the health advisory guidance level established by Illinois EPA. Follow up monitoring is being conducted. For more information about PFAS health advisories http://www2.illinois.gov/epa/topics/water-quality/pfas/Pages/pfas-healthadvisory.aspx*							

Violation Summary Table

Our water system violated monitoring requirements for Total Organic Carbon in May of 2023. We have since taken the required samples, as described in the public notice attached. The samples showed we are meeting drinking water standards.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Lake County Public Water District

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (did) to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During May 2023 we did not complete all monitoring or testing for Total Organic Carbon and therefore cannot be sure of the quality of your drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant we did not properly test for during the last year, how often we are supposed to sample for Total Organic Carbon, 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 (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
Carbon, Total	Monthly	0	5/1/23 – 5/31/23	6/1/23 – 6/30/23

What is being done?

We have since taken the required samples, as described in the last column of the table above. The samples showed we are meeting drinking water standards.

For more information, please contact Jeremy Thompson at 847-746-2052 or 500 17th st Zion, IL 60099.

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 Lake County Public Water District. State Water System ID#: IL0975790.

Date distributed: 03/26/24