



Annual Drinking Water Quality Report for Calendar Year 2017

Mount Carmel Water Plant

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 2013. 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.

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

Contact Name: _____ Keith Reed _____
Telephone Number: _____ 618-262-4871 _____
E-mail (if available) _____ kreed@cityofmtcarmel.com _____

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.

Our source of water comes from **Ground Water**

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 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 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. 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).

Source Water Assessments

Source water protection (SWP) is a proactive approach to protecting our critical sources of public water supply and assuring that the best source of water is being utilized to serve the public. It involves implementation of pollution prevention practices to protect the water quality in a watershed or wellhead protection area serving a public water supply. Along with treatment, it establishes a multi-barrier approach to assuring clean and safe drinking water to the citizens of Illinois. The Illinois EPA has implemented a source water assessment program (SWAP) to assist with wellhead and watershed protection of public drinking water supplies.

Source of Water: MOUNT CARMEL To determine Mount Carmel's susceptibility to groundwater contamination, available data from well logs, land use, and a well site survey were reviewed. During the survey of Mount Carmel's source water protection area, Illinois EPA staff recorded no potential sources, routes, or possible problem sites within the 400 foot minimum setback zone or the 2,500 foot maximum setback zone of the community wells. The Illinois EPA considers the source water of this facility to be susceptible to contamination. This determination is based on a number of criteria including monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, and the available hydrogeologic data on the wells.

2017 Regulated Contaminants Detected

The next several tables summarize contaminants detected in your drinking water supply.

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

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.
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 <i>E. coli</i> MCL	Total No. of Positive <i>E. coli</i> 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).	1	Fecal Coliform or <i>E. coli</i> MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0	Y	Naturally present in the environment

Lead and Copper								
	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	9/5/17	1.3	1.3	0.2068	0	ppm		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	9/5/17	0	15	0	0	ppb		Corrosion of household plumbing systems; erosion of natural deposits.

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. **The City of Mount Carmel Water Department** 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>.

Disinfectants & Disinfection Byproducts	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2017	0.9	0.5-1.01	4	4	Ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2017	33	11.3-43	No goal for the total	60	Ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	61	37.8-68.2	No goal for the total	80	Ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants								
Barium	2017	0.0628	0.0628-0.0628	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.5	0.549-0.549	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2017	2	1.82-1.82	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2017	2	2.37-2.37	50	50	ppb	N	Discharge from petroleum and metal refineries. Erosion of natural deposits; Discharge from mines.
Sodium	2017	10.3	10.3-10.3			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Volatile Organic Contaminants								
Radiological Contaminants								
Combined Radium 226/228	10/13/2015	2.11	2.11-2.11	0	3	pCi/L	N	Erosion of natural deposits.
State Regulated Contaminants								

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.

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	0.207 NTU	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.	

Violation Summary Table

The following table(s) lists all violations that occurred during 2017. We included a brief summary of the actions we took following notification of the violation.

Contaminant or Program	Violation Type	Violation Duration Start Date – End date	Violation Explanation
Lead and Copper Rule	Follow-up or Routine Tap M/R (LCR)	10/01/2017 - 10/31/2017	We failed to collect all required samples to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Health Effects (if applicable)	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.		
Number of Samples	There should have been 20 samples taken during the sampling period. Only 18 were tested.		
Actions we took:	Sample sites will be added to assure that enough samples can be collected to meet requirements. Samples will be re-collected 2018.		
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 your drinking water meets health standards. During October 2017, we did not complete all monitoring or testing for Lead and Copper, and therefore cannot be sure of the quality of your drinking water during that time.			

Contaminant or Program	Violation Type	Violation Duration Start Date – End date	Violation Explanation
Coliform Bacteria	1 positive monthly sample	5/01/17-5/31/17	Naturally present in the environment.
Health Effects (if applicable)	Symptoms of waterborne diseases may include gastrointestinal illnesses such as severe diarrhea, nausea, and possibly jaundice as well as associated headaches and fatigue.		
What should I do?	You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor. • If you have a severely compromised immune system, have an infant, are pregnant, or are/care for the elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.		
Actions we took:	Resampled at sample site within 24 hours, one sample upstream, and one downstream. No coliform bacteria were found to be present. We have continued monthly sampling.		
We routinely monitor for the presence of drinking water contaminants. We took 8 samples for coliform bacteria during May 2017. One of those samples showed the presence of coliform bacteria. The standard is that No samples may contain coliform.			

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.