

**Village of Carpentersville**  
**Annual Drinking**  
**Water Quality Report 2016**  
IL0890200

For the period of January 1 to December 31, 2016

This report is intended to provide you with important information about your drinking water and the efforts made by the Carpentersville Water Department to provide safe drinking water. The source of drinking water used by Carpentersville is Shallow Groundwater Wells, utilizing four wells # 5 thru 8. All Wells are located within Village limits. Water is pumped from several wells then blended together prior to treatment. All residents of Carpentersville utilize common treated water.

If you have any questions about this report please contact Dean Gorter Monday through Friday from 7:00am to 3:00pm at 847- 551-3492. Concerns regarding the Carpentersville Water System can be addressed at village board meetings. Meetings are held at 7:00 pm on the first and third Tuesdays of each month, at the Carpentersville Village Hall 1200 Besinger Drive.

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

**Source of Drinking Water:**

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 of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pickup 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.

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

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).

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 source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Village Hall or call our Water Superintendent at 847-551-3492. To view a summery 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 web site at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

## Source Water Assessment

To determine Carpentersville's susceptibility to groundwater contamination, the following document was reviewed: a Well Site Survey, published in 1990 by the Illinois EPA. Based on the information obtained in this document, there are 3 potential sources of groundwater contamination that could pose a hazard to groundwater utilized by Carpentersville Community Water Supply. These include 1 auto repair shop, 1 store/sales and 1 below ground fuel storage tank. Information provided by the Carpentersville Community Water Supply indicates that the following potential sources listed in the table are currently inactive (below ground storage of petroleum has been removed): Map Code #00916, 00917 and 00918. In addition, information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of Illinois EPA indicated sites with on-going remediation that might be of concern.

Based upon this information, the Illinois EPA has determined that the Carpentersville Community Water Supply's source water is susceptible to contamination. The Illinois EPA is in the process of delineating 5-year recharge area calculations for Carpentersville's wells. The land use within the areas around the wells was analyzed as part of this susceptibility determination. This land use includes open space, residential, and commercial properties.

### 2016 Regulated Contaminants Detected

#### Lead and Copper

**Definitions:**  
**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.  
**Action Level:** The concentration of a contaminate which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 Village of Carpentersville 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 and 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>.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# Sites Over AL	Units	Violation	Likely Source of Contaminant
Copper	07/29/2015	1.3	1.3	0.551	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	07/29/2015	0	15	6.4	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

#### Water Quality Test Results

**Definitions:** The following tables contain scientific terms and measures, some of which may require explanation.  
**Avg:** Regulatory compliance with some MCLs are based on running annual average of monthly samples.  
**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 the 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.  
**Maximum Contaminant Level Goal (MCLG):** 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.  
**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.  
**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of 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 (MRDL):** 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.  
**Definitions:** The following tables contain scientific terms and measures, some of which may require explanation.  
**mrem:** millirems per year ( a measure of radiation absorbed by the body)  
**pCi/L:** picocuries per liter (a measurement of radioactivity)  
**ppm:** milligrams per liter or parts per million – or one ounce in 7,350 gallons of water.  
**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.  
**Treatment Technique or TT:** A required process intended to reduce the level of a contaminant in drinking water.

#### Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Chlorine	12/31/2016	0.5	0.0-0.5	MRDLG=4	MRDL=4	ppm	N	Water additive used to control microbes

<b>Haloacetic Acid HAA5</b>	2016	4.0	1.77-3.98	No goal for the total	60	ppb	N	By-product of drinking water disinfection
<b>Total Trihalomethanes (TThm)</b>	2016	39	35.0-38.7	No goal for the total	80	ppb	N	By-product of drinking water chlorination

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

<b>Inorganic Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contaminant</b>
<b>Arsenic</b>	04/08/2012	1.5	1.5-1.5	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
<b>Barium</b>	04/08/2015	0.053	0.053-0.053	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
<b>Fluoride</b>	04/08/2015	1.23	1.23-1.23	4	4	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<b>Iron</b>	04/08/2015	0.11	0.11-0.11		1	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits
<b>Manganese</b>	04/08/2015	6.1	6.1-6.1	150	150	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits
<b>Nitrate ( measured as Nitrogen)</b>	04/20/16	0.35	0.35-0.35	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<b>Sodium</b>	04/08/2015	190	190-190			ppm	N	Erosion of naturally occurring deposits; Used in water softener regeneration

<b>Radioactive Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
<b>Combined Radium 226/228</b>	2016	0.971	0.971-0.971	0	5	pCi/L	N	Erosion of natural deposits

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 you are on a sodium –restricted diet, you should consult a physician about this level of sodium in the water. 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.