Annual Water Quality Report 2016
Hawthorn Woods Water Service Area

Lake County Illinois Department of Public Works

Purpose and Background

This is the annual water quality report (or consumer confidence report) for the period of January 1 to December 31, 2015. Each year we will issue this report to provide information about the quality of our drinking water as well as details on the source of our water and what it contains. The reports are being issued in compliance with the requirements of the Safe Drinking Water Act and are also intended to demonstrate our commitment to providing a safe and reliable supply of drinking water.

The Water Source, Treatment and Delivery System

The Hawthorn Woods water system was replaced in 2010. The original system, which was constructed in 1951, was replaced with a new distribution system and now receives it's water supply from Aqua Illinois, Inc. The Aqua Illinois water system, located at the intersection of Midlothian Road and Old McHenry Road, includes two groundwater wells that produce a total of 780 gallons per minute, an ion exchange system to treat the water supply, plus a 370,000 gallon storage reservoir. The system meets all EPA regulations and requirements.

The water main network which serves the subdivision includes 5.5 miles of water main pipe. The water main pipe interconnects the Aqua wells and storage reservoir to form a unified water supply and distribution system.

Este es un reporte importante sobre la calidad de su agua. Si usted no cuenta con alguien que pueda traducirle este reporte, llame al Lake County Public Works al 847.377.7500 y con mucho gusto le asistiremos.

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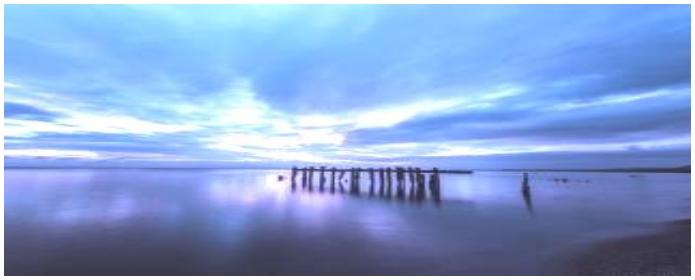

Water Quality

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 US Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at 1-800-426-4791.

To ensure that tap water is safe to drink, the Environmental Protection Agency prescribes limits on the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Your tap water quality is consistently monitored by the County and by the Illinois Environmental Protection Agency (IEPA).

Water quality is judged by comparing your water to USEPA benchmarks for water quality. One such benchmark is called the Maximum Contaminant Level Goal (MCLG). The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. This goal allows for a margin of safety. Another benchmark is a Maximum Contaminant Level (MCL). An MCL is the highest level of a contaminant that is allowed in drinking water. An MCL is set as close to an MCLG as feasible using the best available treatment technology. The MCL and MCLG are established by the USEPA.

Public Participation… If you have any questions about this report, or about your water system, please contact Austin McFarlane at 847-377-7500 or by email to amcfarlane@lakecountyil.gov. You may also visit the Lake County website at www.lakecountyil.gov to learn about opportunities for public participation at County Board meetings where decisions are made that affect drinking water quality. We always like to hear from our customers.

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Source Water: (Aqua) Contaminants Detected

Compound (Units)	Highest Level Found	Range of Detection	MCLG	MCL	Violation	Sample Date*	Probable Compound Source
Disinfectants & Disinfectant By-Products							
Chlorine (ppm)	0.8	0.55 - 1.1	MRDLG=4	MRDL=4	N	2015	Water additive used to control microbes.
Total Haloacetic Acids (HAA5) (ppb)	2.00	n/a	No goal for the total	60	N	2015	By-product of drinking water chlorination.
Total Trihalomethanes (TTHMs) (ppb)	15.6	15.6	No goal for the total	80	N	2015	By-product of drinking water chlorination.
Inorganic Contaminants							
Barium (ppm)	0.13	n/a	2	2	N	2015	Erosion of natural deposits.
Fluoride (ppm)	1.02	n/a	4.0	4.0	N	2015	Added for dental health.
Iron (ppm)	0.73	n/a	n/a	1.0	N	2015	Erosion of natural deposits.
Manganese (ppm)	0.0063	n/a	0.150	0.150	N	2015	Erosion of natural deposits.
Sodium (ppm)[1]	77	n/a	n/a	n/a	N	2015	Erosion of natural deposits.
Zinc (ppm)	0.007	n/a	n/a	5	N	2015	Erosion of natural deposits.
Radioactive Contaminants							
Combined Radium (226/228) (pCi/L)	2.97	n/a	0	5	N	2015	Erosion of natural deposits.
Gross Alpha excluding radon and uranium (pCi/L)	2.97	n/a	0	15	N	2015	Erosion of natural deposits.

* Some contaminants are sampled less frequently than once a year; as a result, not all contaminants were sampled during the CCR calendar year. If any of these contaminants were detected the last time they were sampled, they are included in the table along with the date that the detection occurred.

[1] There is not a state or federal MCL for sodium and sulfate. Sodium Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions.

Abbreviation	Definition
AL	Action Level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
LRAA	Locational Running Annual Average is the average of all monthly or quarterly samples for the last year at specific monitoring locations.
MCL	Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water.
MCLG	Maximum Contaminant Level Goal is the contaminant level below which there is no known or expected health risk.
MRDL	The highest level of a disinfectant allowed in drinking water.
MRDLG	The level of a drinking water disinfectant below which there is no known or expected risk to health.
mrem/yr	millirems per year.
n/a	Not applicable
pCi/L	picocuries per liter.
ppb	Parts-per-billion is also referred to as micrograms per liter (µg/L). Equivalent to one ounce in 7,350,000 gallons of water.
ppm	Parts-per-million is also referred to as milligrams per liter (mg/L). Equivalent to one ounce in 7,350 gallons of water.
RAA	Running Annual Average is the average of all monthly or quarterly samples for the last year at all the sample locations.
TT	Treatment Technique refers to a required process intended to reduce contaminant levels in drinking water.
Source Water	Primary system treatment facility that provides drinking water (AQUA).
System Water	Water that is present within the operating system (distribution pipes, reservoirs, tanks).

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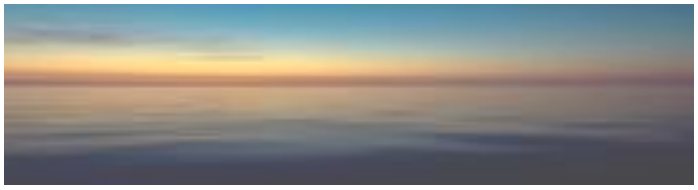

System Water: Contaminants Detected

Compound (Units)	Highest Level Found	Range of Detection	MCLG	MCL	Violation	Sample Date*	Probable Compound Source
Chlorine (ppm)	1.7	0.8 - 1.7	MRDLG=4	MRDL=4	N	2015	Water additive to control microbes.
Total Haloacetic Acids (HAA5) (ppb)	4.94	4.94 - 4.94	No goal for the total	60	N	6.25.15	By-product of drinking water chlorination.
Total Trihalomethanes (TTHMs) (ppb)	7.25	7.25 - 7.25	No goal for the total	80	N	6.25.15	By-product of drinking water chlorination.

Lead and Copper

Compound (Units)	90th Percentile	# of Sites Over Action Level	MCLG	Action Level	Sample Date*	Probable Compound Source
Copper (ppm)	0.202	0	1.3	1.3	8.2014	Erosion of natural deposits; Corrosion of household plumbing.
Lead (ppb)	3.2	0	0	15	8.2014	Erosion of natural deposits; Corrosion of household plumbing.

Coliform Bacteria

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

Understanding the Columns	
Highest Level Found	Represents the highest sample result collected during the calendar year, unless otherwise noted.
Range of Detections	Represents the range of individual sample results, from lowest to highest that were collected during the calendar year, unless otherwise noted.
Sample Date	Will reflect the date the sample was most recently analyzed.
Violation	Will indicate whether or not a violation occurred with each contaminant that was detected.
Probable Source	Lists where contaminants may originate.

Source Water Assessment

Based on 2006 Well Site Survey performed by the Illinois Environmental Protection Agency, no potential sources of contamination were identified within proximity of this water supply's wells. The Illinois Environmental Protection Agency (IEPA) does not consider the source water succeptable to contamination. Futhermore, the IEPA determined that the supply is not vulnerable to viral contamination. All potential routes and sanitary defects have been mitigated such that the source water is adequately protected. A copy of this report can be obtained by calling Kevin Culver at 815-614-2057 or at the website http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- *Eliminate excess use of lawn and garden fertilizers and pesticides, which contain hazardous chemicals that can reach your drinking water source*
- *Pick up after your pets*
- *Dispose of chemicals properly; take used motor oil to a recycling center*

Important Health Information

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. The USEPA and Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

NOTE: Lake County is in full compliance with all State and Federal regulations governing the control of lead and copper within public drinking water supplies. 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 Works 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 about lead in drinking water, testing methods, and steps to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Contaminant Sources in Drinking Water

Both tap and bottled water come from rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animal or human activity. Contaminants that may be present in untreated water include:

- Microbial contaminants such as viruses and bacteria can be naturally occurring or may come from sewage treatment plants, septic systems and live stock operations.
- Inorganic contaminants such as salts and metals can be naturally occurring or can result from urban storm water runoff, wastewater discharges, oil or gas production, mining, or farming.
- Pesticides and herbicides come from sources such as agricultural and residential storm water runoff.
- Organic chemical contaminants including synthetic and volatile organic compounds are by-products of industrial processes and petroleum production but can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.