

2018 Water Quality Report



This is your annual water quality report for the period of January 1 through December 31, 2018. Each year the Village of Gurnee issues this report to provide you information about the quality of our drinking water, the source of our water, how it is treated and the regulated compounds it contains. These reports are issued in compliance with the Safe Drinking Water Act. For more detailed information about our water's quality, including test results for unregulated compounds, contact Melissa Olenick at CLCJAWA at 847-295-7788 or email at molenick@clcjawa.com, Brett Fritzler at 847- 599-6800, visit our web page at www.gurnee.il.us, or visit the CLCJAWA web page at www.clcjawa.com. *Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo*

FROM THE SOURCE

Villages purchase water from the Central Lake County Joint Action Water Agency. CLCJAWA is an inter-governmental cooperative, formed by the communities it serves: Grayslake, Gurnee, Lake Bluff, Lake Villa, Libertyville, Lindenhurst, Mundelein, Round Lake, Round Lake Beach, Round Lake Heights, Round Lake Park, Volo, Wauconda and Lake County representing the unincorporated areas of Knollwood, Rondout, Vernon Hills, Wildwood, Grandwood Park and Fox Lake Hills.

THE TREATMENT PROCESS

Our water is pumped from Lake Michigan and treated at CLCJAWA's Paul M. Neal Water Treatment Facility in the Village of Lake Bluff. The enhanced water purification process used by CLCJAWA is unique. First, the water is treated with ozone to kill organisms and break down contaminants. Ozone is produced on-site from air, bubbled into the water and then converted back into oxygen. The water is then mixed with coagulant to remove sediment and other material from the water. Once clarified, the water is further refined as it passes through filters containing activated carbon and fine sand to remove any remaining cloudiness or turbidity. Turbidity is then measured to determine water clarity. Treatment facilities monitor turbidity because it is a good indicator of water quality and the effectiveness of their filtration and disinfection systems. At CLCJAWA, turbidity is checked every ten seconds in numerous locations by automatic monitoring equipment and twice a day, by hand, in the laboratory (see results on page 3).

The water is treated with ultraviolet light to inactivate any remaining organisms. Finally, the purified water is treated with chlorine to protect it as it travels through the water main, fluoride

for dental health and a small amount of an often used food additive called phosphate. Phosphate protects the water from the metals, such as lead and copper, found in home plumbing systems.

CLCJAWA received the Excellence in Water Treatment award for the last 13 years. CLCJAWA was the third facility in the nation to achieve this distinction presented by the Partnership for Safe Water. This voluntary water quality program, sponsored in part by the United States Environmental Protection Agency, holds its awardees to higher standards than required by current Federal and State drinking water regulations.

FOR MORE INFORMATION

The Village Board has a monthly meeting schedule and the public is always welcome to attend any of these meetings. Our Mayor is also a member of the Board of Directors of CLCJAWA, which meets regularly. Please visit the website at www.clcjawa.com for the current meeting schedule. CLCJAWA provides tours of the water treatment facility and staff members are also available for public speaking or for school visits. Please contact the Village or CLCJAWA for more information.

CLCJAWA was in full compliance with all State and Federal drinking water regulations in 2018.

DELIVERY TO YOUR TAP

CLCJAWA utilizes over 50 miles of pre-stressed concrete, ductile iron and PVC water main to deliver water to your community. The Village of Gurnee, in turn, maintains its own water distribution system that delivers the water to homes, schools and businesses in the community. The Village services over 9,500 water accounts and is responsible for maintaining over 188 miles of water main. Water is stored in three elevated tanks and one ground storage tank for a total storage capacity of 6 million gallons. In addition to CLCJAWA, the Village also maintains two emergency back-up wells. These two wells are periodically tested in accordance with IEPA regulations. The Village also maintains a connection with the City of Waukegan as an additional back-up source.

The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, or information regarding the back-up wells, please contact Public Works at 847-599-6800. Information provided by this assessment did not indicate any potential sources of contamination.

LAKE MICHIGAN EXPOSURE TO CONTAMINANTS

The Illinois EPA, using the Great Lakes Protocol, completed source water assessment in April 2003. Lake Michigan is a surface water source and like all surface waters, is susceptible to potential contaminants. The very nature of surface water allows contaminants to migrate to the intake with no protection, only dilution. CLCJAWA's intake is ranked as moderately sensitive to potential contaminants. There are no potential contamination sources within the intake's critical assessment zone. However, the combination of land use, storm sewer outfalls and the proximity of North Shore Water Reclamation District (NSWRD) pumping stations in the immediate area add to the susceptibility of CLCJAWA's intake. NSWRD discharges their treated waste water to the Des Plaines River and not into Lake Michigan. Access the following website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl> to view a summary of the source water assessment.

We are all participants in the water cycle. Our individual activities impact the rivers and lakes in our watershed and those into which our waste water plants discharge. Please properly use, store and dispose of all medications and household chemicals. Visit the Solid Waste Agency of Lake County website for disposal options and information at www.swalco.org.

LEAD AND DRINKING WATER

Elevated levels of lead can cause serious health problems, especially in pregnant women and young children. Some homes with old lead service lines, lead plumbing or copper plumbing with lead solder may have lead and copper in their water. To

minimize these levels, the Illinois EPA requires that CLCJAWA add phosphate to our water at a concentration of 0.3 ppm orthophosphate. This commonly used food ingredient thinly coats the inside of your premise plumbing.

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. For the best quality and to minimize the potential for lead and copper exposure, you may flush your tap until the water is cool or for 30 seconds to 2 minutes before using the water for drinking or cooking. To know with certainty whether you have lead or copper in your drinking water, have your water tested at a certified laboratory.

As of January 16, 2017, all schools kindergarten through 5th graders, as well as day care facilities, must test all water sources used for cooking and drinking for the presence of lead. Any facilities constructed after 2000 are not required to complete the testing at this time. Schools should notify parents of the results if any levels exceed 5 ppb at any location, as well as any actions the schools are taking to reduce the levels. Water providers have now generated an inventory of all known lead service lines in use and are issuing public notification to homeowners of local water main construction or repair work that might increase the risk of lead exposure. For more information on lead in drinking water, testing methods and steps you can take to minimize exposure, contact the Village of Gurnee at 847-599-6800.

Knowles Road water tower construction, May 2019



ABOVE AND BEYOND

Our tap water quality is consistently monitored by the Village, by the Illinois Environmental Protection Agency (IEPA), in the CLCJAWA Water Quality Lab and by other independent labs. This aggressive water quality assurance program is thorough: bacteriological tests are conducted six times; more often than required, water clarity is monitored every 10 seconds and our water is checked for over three hundred contaminants annually.

Water Quality Contaminants Detected in 2018

Contaminant (unit of measure) Typical Source of Contaminant	Highest Level Detected	MCLG	MCL	Range of Detection	Violation	Date of Sample
MICROBIAL CONTAMINANTS						
Total Coliform Bacteria (% Pos/Month) Naturally present; human and animal fecal waste	0	0	5% per month	none	In Compliance	Monthly
E. Coli (% Pos/Month) Naturally present; human and animal fecal waste	0	0	0% per month	none	In Compliance	Monthly
Turbidity (NTU/Lowest Monthly % < 0.3 NTU) Lake Sediment; soil runoff	100% below 0.3 NTU	none	0.3 NTU	100%	In Compliance	Monthly
Turbidity (NTU/Highest Single Measurement) Lake Sediment; soil runoff	0.049	none	1 NTU	0.02 – 0.049	In Compliance	1/8/2018 Monthly
INORGANIC CONTAMINANTS						
Nitrate as nitrogen (ppm) Runoff from fertilizer; leaching from septic; natural erosion	0.4	10	10	Single Sample	In Compliance	11/6/2018
Arsenic (ppb) Erosion of natural deposits, glass and electronic waste, runoff from orchards	1	0	10	0-1.08	In Compliance	2018
Barium (ppm) Discharge of drilling wastes & metal refineries; natural erosion	0.018	2	2	Single Sample	In Compliance	11/6/2018
Copper (ppm) Corrosion of household plumbing systems; natural erosion	0 90 th Percentile	1.3	AL=1.3	0 Sites over AL	In Compliance	7/2018
Lead (ppb) Corrosion of household plumbing systems; natural erosion	0 90 th Percentile	0	AL=15	0 Sites over AL	In Compliance	7/2018
DISINFECTANT/DISINFECTION BY-PRODUCTS						
HAA5 Haloacetic Acids (ppb) By-product of drinking water disinfection	7.8	None	60	3.67 – 7.8	In Compliance	9/2018 Quarterly
TTHMs Total Trihalomethanes (ppb) By-product of drinking water disinfection	27.1	None	80	12.66 – 27.1	In Compliance	8/2018 Quarterly
Bromate (ppb) By-product of drinking water disinfection	7.30	0	10	0 – 7.30	In Compliance	8/9/2018 Quarterly
Chlorine (ppm) Drinking water disinfectant	0.9	4	4	0.4 – 0.9	In Compliance	Monthly
TOC (Total Organic Carbon)	The % of TOC removal was measured each month and the system met all removal requirements set by IEPA					
STATE REGULATED CONTAMINANTS						
Fluoride (ppm) Water additive that promotes strong teeth; natural erosion	0.7	4	4	0.5 – 0.7	In Compliance	8/9/2018 Monthly
Sodium (ppm) Erosion of naturally occurring deposits; water softener	8.0	none	none	Single Sample	In Compliance	11/6/2018
RADIOACTIVE CONTAMINANTS						
Combined Radium 226/228 (pCi/L) Decay of natural and man-made deposits	0.92	0	5	Single Sample	In Compliance	4/13/15
Gross Alpha Emitters (pCi/L) Erosion of natural deposits	0.39	0	15	Single Sample	In Compliance	4/13/15

The table above lists all of the regulated compounds detected in our water. Bolded compounds were sampled by the Village; all other compounds were sampled by CLCJAWA. The values shown in the level detected column are those used by the EPA to determine compliance with drinking water standards. Because each compound is regulated differently, this value may be a running average, a 90th percentile or a maximum single value. The sample data column indicates the date when the sample was collected. When more than one sample is collected, this column shows the date of the maximum value.

Units of Measure:

ppm: parts per million or milligrams per liter
 ppb: parts per billion or micrograms per liter
 pCi/: picocuries per liter used to measure radioactivity
 NTU: nephelometric turbidity unit that measures clarity in drinking water

Definition of Terms:

Action Level (AL): level that triggers special treatment or other required action by water plants
 Maximum Contaminant Level (MCL): the highest level of contaminant that is allowed in drinking water
 Maximum Contaminant Level Goal (MCLG): level of a contaminant below which there is no known or expected health risk
 Treatment Technique (TT): required process used to reduce contaminants in 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 1-800-426-4791.

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 materials 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 livestock operations.
- Inorganic contaminants such as salts and metals can be naturally occurring or result from urban storm water runoff, wastewater discharges, oil and 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 system.
- Radioactive contaminants can be naturally occurring or be the result of oil, gas and mining activities.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Consumer Confidence Report Adequacy/Availability/Content Violation

The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems. From July 1, 2018 through August 9, 2018 the provided CCR did not contain all of the required/educational language. The Consumer Confidence Report was promptly corrected on August 9, 2018 and compliance status restored.

Routine Monitoring Violation

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. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of getting cancer. During February 1-28, 2018 we did not collect samples for Total Haloacetic Acids (HAA5) or Total Trihalomethanes (TTHM). The required samples were taken March 5, 2018 and the results showed we are meeting the drinking water standards.

REGULATORY AGENCIES

To ensure tap water safety, the U.S. Environmental Protection Agency (USEPA) prescribes limits on the amount of certain contaminants in our drinking water. Water quality may be judged by comparing our water to USEPA benchmarks for water quality. One such benchmark is 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 the 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.

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/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

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