

Village of Round Lake Beach

2011 Annual Drinking Water Quality Report



Dear Water Customer,

This is your annual water quality report for the period of January 1 through December 31, 2010. Each year the Village 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 Bill Soucie at CLCJAWA at 847-295-7788 or Round Lake Beach Public Works Department at 847-546-8752. 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 entienda bien.*

Where does our water come from?

Our Village purchases water from the Central Lake County Joint Action Water Agency (CLCJAWA). CLCJAWA is an intergovernmental cooperative, formed by the communities it serves: Grayslake, Gurnee, Lake Bluff, Libertyville, Mundelein, Round Lake, Round Lake Beach, Round Lake Heights, Round Lake Park, and Lake County representing the unincorporated areas of Knollwood, Rondout, Wildwood and Vernon Hills.

How is our water treated?

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. Next, 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 found in our homes' plumbing systems.

CLCJAWA is a six-time Excellence in Water Treatment award winning facility. 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 drinking water regulations.

How is the water delivered to my tap?

The Village is responsible for maintaining more than 83 miles of water main, two (2) elevated tanks, and one (1) ground storage tank, for a total storage capacity of 4,000,000 gallons of water. We are also continuing a multiyear water system improvement plan initiated in 1990.

The Village also maintains a number of emergency back-up wells. The wells are exercised and the well water is tested regularly for quality assurance.

How is our water's quality assured?

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 hundreds of contaminants.

How is our drinking water regulated?

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.

What regulated compounds are found in our drinking water?

The table below lists all of the regulated compounds detected in our water. Italicized compounds were measured by CLCJAWA, all other compounds were measured by the Village. 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 the maximum single value. The Sample Date 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. Explanation of MCLG and MCL may be found in the Abbreviation Table below.

Compound (Units)	Level Detected	Range of Levels Detected	MCLG	MCL	Violation?	Sample Date	Primary Compound Sources
<i>Alpha Emitters (pCi/l)</i>	2.6	Single Sample	0	15	No	11/12/08	Decay of natural deposits
<i>Arsenic (ppb)</i>	1	1 - <2	0	10	No	7/19/10	Erosion of natural deposits, runoff
<i>Barium (ppm)</i>	0.021	0.018 – 0.021	2	2	No	7/19/10	Erosion of natural deposits, runoff, metal refinery discharge
<i>Beta/Photon Emitters (mrem/yr)</i>	3.9	Single Sample	0	50	No	11/12/08	Decay of natural deposits
<i>Bromate (ppb)</i>	1.3	<1 – 1.3	0	10	No	10/27/10	By-product of disinfection
<i>Chlorine (ppm)</i>	0.8	0.6 – 0.9	4	4	No	12/31/10	Added for disinfection
<i>Chromium, Total (ppb)</i>	1.4	1.4 - <5	100	100	No	3/3/10	Erosion of natural deposits, runoff, metal refinery discharge
<i>Combined Radium 226/228 (pCi/l)</i>	1.6	Single Sample	0	5	No	11/12/08	Decay of natural deposits
<i>Fluoride (ppm)</i>	1.1	0.9 – 1.1	4	4	No	4/21/10	Added for dental health
<i>Iron (ppm)</i>	0.21	<0.02 – 0.21	0.3	1	No	3/3/10	Erosion of natural deposits, runoff, metal refinery discharge
<i>Nickel (ppb)</i>	3.1	<1 – 3.1	None	100	No	3/3/10	Erosion of natural deposits, runoff, metal refinery discharge
<i>Nitrate (mg/L)</i>	0.35	0.30 – 0.35	10	10	No	4/8/10	Naturally occurring
<i>Sodium (ppm)</i>	14	7.8 - 14	None	None	No	3/3/10	Erosion of natural deposits, runoff
<i>Total Haloacetic acids (ppb)</i>	4	1 - 8	None	60	No	02/07/11	By-product of chlorine disinfection
<i>Total Trihalomethanes (ppb)</i>	12	6 - 20	None	80	No	02/07/11	By-product of chlorine disinfection
<i>Turbidity (% acceptable)</i>	100%	100%	None	0.3 TT	No	12/31/10	Lake sediment, soil runoff
<i>Turbidity (NTU)</i>	0.08	0.03 - 0.08	None	1 TT	No	10/20/10	Lake sediment, soil runoff

Abbreviation	Definition
Action Level	Action Level is the level that triggers special treatment or other required actions by a water supply.
MCL	Maximum Contaminant Level is the highest level allowed by EPA in drinking water.
MCLG	Maximum Contaminant Level Goal is the level of a contaminant below which there is no known or expected health risk.
NTU	Nephelometric Turbidity Units. Turbidity is a measure of water clarity.
pCi/l	pico Curies per liter. EPA considers 50 pCi/L to be a level of concern for beta particles.
pos/month	The maximum number of positive samples collected in a calendar month.
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.
TT	Treatment Technique refers to a required process intended to reduce contaminant level drinking water.

Lead and Copper:

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 coats the inside of your plumbing with a thin film. The film reduces lead and or copper levels that may have otherwise leached from your plumbing into your water.

Sodium:

There is no state or federal MCL for sodium. Monitoring is required to provide information to consumers in case you are concerned about sodium intake for dietary reasons. If the sodium level in our water was greater than 20 ppm, and you were on a sodium-restricted diet, you would be advised to consult a physician.

Turbidity:

Turbidity is a measure of 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 every four hours, by hand, in the laboratory.

Was CLCJAWA or the Village cited with any drinking water violations this year?

CLCJAWA was in full compliance with all drinking water regulations this year.

The Village of Round Lake Beach was in full compliance with all drinking water regulations this year.

Where do water contaminants come from?

Drinking water, including bottled water, may reasonably be expected to contain 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 may be obtained by calling the US Environmental Protection Agency's (USEPA) 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 systems.
- Radioactive contaminants can be naturally occurring or be the result of oil, gas, and mining activities.

Has Lake Michigan been assessed to determine how susceptible it is to potential contamination?

The Illinois EPA, using the Great Lakes Protocol, completed an 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 Sanitary District (NSSD) pumping stations in the immediate area add to the susceptibility of CLCJAWA's intake. NSSD discharges their treated waste water to the Des Plaines River and not into Lake Michigan.

Keep our rivers and lakes clean. Never flush or pour unused medications down the drain.

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.

What precautions should immune compromised persons take?

Some people may be more vulnerable to drinking water contaminants than the general population. Immune 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 from their health care providers about drinking water. 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.

How can I get involved?

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 on the fourth Wednesday of each month. 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.