



Village Of Libertyville

Drinking Water Quality Report

2010 Reporting Year

This is your annual water quality report for the period of January 1st through December 31, 2010 which applies to properties within the Village limits of Libertyville. Each year the Village issues this report to provide information about the quality of our drinking water, the source of our water, how it is treated, and what it contains. These reports are issued in compliance with the requirements of the Safe Drinking Water Act.

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 eleven Lake County communities it serves. In the unlikely event CLCJAWA is unable to deliver water, the Village has retained several wells (formerly used as our water supply), which are operated, flushed and sampled for bacteriological quality on a monthly basis to ensure reliability. Please contact us if you would like to review our well sample results. The water system also includes a number of storage tanks, pumping stations, and valves which create four separate pressure zones in the village.

How is our water purified?

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 fluoride for dental health, chlorine to protect it as it travels through the water main, and a small amount of an often used food additive called phosphate. Phosphate protects the water from the metals found in your home's plumbing system.

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 related 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 continually improving and maintaining the water distribution system. These improvements include fire hydrant and valve replacements, residential water meter upgrade/repair, and the replacement of aging water mains as budget allows. These improvements further assure the continued, uninterrupted conveyance of quality drinking water to your tap.

Quick Facts

Population served	22,000	Total Storage Capacity	4,100,000	Backup Well Capacity	1,600 gpm
Metered customers	7,469	Cook Tower Built 1957	300,000	Garfield Well Built 1935	750 gpm
Average daily usage	2,735,038	Winchester Tower Built 1965	300,000	Second Street Built 1930	350 gpm
Miles of water main	117.391	Red Top Reservoir Built 1979	1,000,000	Newberry Well Built 1951	500 gpm
Fire hydrants	1,350	Garfield Tower Built 1971	1,000,000		
Water system valves	1,350	Centrum Reservoir Built 1991	1,500,000		

About our Water Department

Six full time technicians with Illinois Class C water licenses. Our team members belong to the American Water Works Assoc. and North Suburban Water Works Assoc, and Illinois Potable Water Supply Operators Assoc. Our Public Works Department is one of 50 in North America that has achieved accreditation with the American Public Works Association. The Insurance Service Office Rating (ISO) for our water department is 1 = 90% or better rating.

Partial list of water department functions		
Check for leaks & low pressure calls	Meter changes	Water main, service & b-box repairs
Emergency water shut-offs	Meter readings	Water samples
Hydrant flushing & repair	Water taps	Valve exercising & repair
Providing locating of Village utilities		

The average customer satisfaction rating given by our water customers is 8.8 with 9 being the highest score based on service request responses.

How is our drinking water regulated?

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that 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.

How is our water's quality assured?

Our tap water quality is consistently monitored by the Village, by the Illinois Environmental Protection Agency (IEPA), by 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.

What regulated compounds are found in our drinking water?

The following tables list all of the regulated compounds detected in our water. Each compound is regulated differently. The values shown in the Level Detected column are those used by the EPA to determine compliance with drinking water standards. This value may be a running average, a 90th percentile, or a maximum single value. Italicized compounds were measured by CLCJAWA, all other compounds were measured by the Village.

COMPOUND (UNITS)	LEVEL DETECTED	RANGE OF LEVELS DETECTED	MCLG	MCL	VIOLATION?	SAMPLE DATE	LIKELY SOURCE OF CONTAMINATION
<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
Chlorine (ppm)	0.9	0.2 – 0.9	MRDLG =4	MRDL= 4	No	05/04/10	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
Lead (ppb)	7.17	1	0	15	No	07/08/08	Household plumbing corrosion
<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
Total Haloacetic acids (ppb)	4.5	1.01 – 4.5	None	60	No	1/30/10	By-product of chlorine disinfection
Total Trihalomethanes (ppb)	31.8	19.7-31.8	None	80	No	7/22/10	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
COMPOUND (UNITS)	LEVEL DETECTED	# OF SITES OVER ACTION LEVEL	MCLG	ACTION LEVEL	VIOLATION?	SAMPLE DATE	PRIMARY COMPOUND SOURCES
Lead (ppb)	7.17	1	0	15	No	07/08/08	Household plumbing corrosion

ABBREVIATION	DEFINITION
Action Level (AL)	The concentration of a contaminant that triggers treatment or other required actions by the water supply.
Maximum Contaminant Level Goal (MCLG)	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.
Maximum Contaminant Level (MCL)	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a 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 level of a drinking water disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
NTU	Nephelometric Turbidity Units. Turbidity is a measure of water clarity.
pCi/l	picocuries per liter (a measure of radioactivity) EPA considers 50 pCi/L to be a level of concern for beta particles.
ppb	Parts-per-billion, or micrograms per liter (µg/L). Equivalent to one ounce in 7,350,000 gallons of water.
ppm	Parts per-million, or milligrams per liter (mg/L). Equivalent to one ounce in 7,350 gallons of water.
Treatment Technique (TT)*	A required process intended to reduce the level of a contaminant level in 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.

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 Libertyville and CLCJAWA are responsible for providing high quality drinking water, but cannot control the variety of materials used in your home's 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. 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>.

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 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?

No citations or violations.

Where do water contaminants come from?

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 may be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791.

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 land or through the ground, it can dissolve naturally occurring materials and radioactive materials, and pick up substances resulting from the presence of animals or human activity. Possible contaminants consist of:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, and livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which may 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 agricultural, 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 may also come from gas stations, urban storm water runoff and septic systems; and
- Radioactive contaminants, which may be naturally occurring or be the result of oil and gas production 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 pumping stations in the immediate area add to the susceptibility of CLCJAWA's intake.

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 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.

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. The Mayor of Libertyville 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.

For specific information about our water's quality or any other water related question, contact Mike Brady, Water Supervisor 847-362-3434 or Bill Soucie at CLCJAWA at 847-295-7788. Or, visit our web page at www.libertyville.com or the CLCJAWA web page at www.clcjawa.com

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

What is a backflow preventer?

A **backflow prevention** device is used to protect water supplies from contamination or pollution. Backflow devices are required by the U. S. Environmental Protection Agency (EPA) to prevent the back siphonage of harmful materials into the public water supply. The EPA and Village of Libertyville ordinance 25-28 requires the proper installation and **annual inspection and repair** of backflow devices by a duly licensed plumber who is also a licensed cross connection control device inspector.

Who needs backflow preventer?

Homeowners, if you have an irrigation system or fire sprinkler system make sure you have backflow devices installed and inspected annually.

Businesses are required to have devices installed if they have irrigation systems, fire sprinkler systems, and/or because the nature of their business poses a greater risk of contamination.

If you have any questions about Cross-Connection Devices, the ordinance or the requirements regarding call (847)362-3434



Cross-connection violations may require the village to discontinue the water service to any customer's premises wherein any cross-connection control device required by ordinance is not installed, tested, maintained or repaired in a manner acceptable to the director, or if it is found that the cross-connection control device has been removed or by passed, or if an unprotected cross-connection exists on the premises, or if a low pressure cut-off or other device required by this article is not installed and maintained in working order, or if any person is found to be violating any provision of this article.

Any person violating any of the provisions of this ordinance, in addition to the foregoing, shall become liable to the village for any expense, loss or damage occasioned by the village by reason of such violation, whether the same was caused before or after notice. If contamination of the municipal water system occurs through an illegal cross-connection or an improperly installed, maintained or repaired cross-connection control device, or a cross-connection control device which has been bypassed, the customer responsible for such contamination shall bear the cost of clean-up or repair to the municipal water system. View ordinance online: <http://library.municode.com/index.aspx?clientId=12585&stateId=13&stateName=Illinois>.

Violators may also liable for damages to the health and property damages of other water consumers.



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