ASSOCIATION MEMBERSHIPS:
AWWA: AMERICAN WATER WORKS
MRWA: MINNESOTA RURAL WATER

2013 Litchfield Water System Annual Drinking Water Report

City of Litchfield Water Department is delivering to water customers our Drinking Water Quality Report for January 1- December 31, 2013, a requirement of the 1996 reauthorization of the Safe Drinking Water Act. This legislation, passed by Congress and signed by President Clinton, requires public water systems across the country to report to their customers information about the safety and quality of the water provided. In this report, you will find water quality monitoring data required by the Environmental Protection Agency (EPA) and the State of Minnesota. Additional information from the EPA is provided. We welcome this opportunity to convey information about your drinking water and water distribution system; we believe our customers deserve nothing less than a rigorous and comprehensive evaluation of the quality of the water they drink.

Litchfield's Water Sources

Like most small - and medium-sized cities in the United States, Litchfield obtains its water from a groundwater source. The earth and rock formations that hold water beneath the earth's surface are known as aquifers. Our water is drawn from four wells, ranging in depth from 132 to 165 feet, drilled into the Quaternary Buried Artesian aquifer. Groundwater sources such as ours are able to avoid contamination from microorganisms like Cryptosporidium and Giardia.

If you have questions or comments regarding this report or water issues, we welcome your call, Water Supervisor Herb Watry, at (320) 693-7201.

Monitoring Report Summary

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected in trace amounts last year.

According to the EPA, 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

Substances Detected in the Litchfield Water Supply

Contaminant (units)	MCLG	MCL	Range	Level Found Average /Result*	Typical Source of Contaminant
Arsenic (ppb)	0	10	N/A	3.4	Erosion of natural deposits; Runoff from orchards; glass and electronics production waste.
Barium (ppm)	2	2	N/A	.31	Discharge of drilling wastes and refineries. Erosion of natural deposits.
Fluoride (ppm)	4.0	4.0	.93-1	.96	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5) (ppb)	0	60.0	15.2-16.5	16.5	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	l0.4	10.4	N/A	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes)	0	80	26.3-43.4	43.4	By-product of drinking water (ppb) disinfection

*This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values.
If it is an average, it may contain sampling results from the previous year.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	* nd-2.16	.83	Water additive used to control microbes.
Highest and Lowest Monthly Average.			****	●●●●●	Highest Quarterly Average

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm)	1.3	1.3	.93	0 out of 20	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)	0	15	1.7	0 out of 20	Corrosion of household plumbing systems. Erosion of natural deposits.

*Non detectable.

Key: MCL: Maximum contaminant level (the highest amount allowed in drinking water. Set as close to MCLGs as feasible using the best available treatment technology.) MCLG: Maximum contaminant level goal (level below which there is no known or expected risk to health, allows for a margin of safety.) AL: Action Level-the concentration which, if exceeded, triggers treatment or other requirement system must follow. PPM: parts per million. PPB: parts per billion. ND: Not detected.

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. City of Litchfield 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 with 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

Water Treatment

Seldom does water come straight from the ground or from a surface water source needing no treatment to improve its quality. Litchfield Water Department processes source water in the following ways so that the water will be safe and pleasurable to drink and use for household and industrial tasks:

Iron and Manganese Removal.
These harmless minerals are common in Minnesota ground water, and our wells are typical of the state. Iron concentrations greater than 0.3 parts per million (ppm) can leave rust-colored stains on laundry, porcelain, and fixtures. Levels of manganese greater than 0.05 ppm can tint the water, cause black spots in ice cubes, and cause the water to have a bitter, metallic taste. These minerals are removed from the water by a process known as oxidation and filtration so customers will not be troubled by their nuisance characteristics.

Disinfection. Any possible disease-causing organisms are eliminated using chlorine.

Fluoridation. Fluoride is added to the water at state mandated levels. Fluoride has been proven to reduce tooth decay, especially in children.
Minnesota State Statute 144.145 or go to www.revisor.leg.state.mn.us/statues/?id=144.145

Corrosion Control. A corrosion inhibitor is added to the water that provides a protective coating to the inside of your pipes. This minimizes the amount of lead and copper that can be leached into the water

Water Treatment Results

*Water with hardness of 150 to 300 ppm is considered "hard." Water with hardness greater than 300 ppm is considered "very hard."

Parameter	Before treatment	Average After treatment	Ideal
Hardness		320 ppm	
pH	7.8	7.3	6.5-8.5
Iron (ppm)	3.4	0.2	<0.3
Manganese (ppm)	0.18	<0.1	<0.05

Water Testing

Three different groups test Litchfield's water: The MN Dept. of Health, Litchfield Water Department employees, and Independent Labs. The water is tested for both regulated and unregulated substances. Levels of regulated substances are enforced through Maximum Contaminant Levels (MCLs) established by Congress. Unregulated substances do not have established MCLs, but may have recommended maximums set by the Safe Drinking Water Act or are assessed using state standards known as Health Risk Limits. Be assured the **Litchfield Water Department** will take corrective action and notify customers immediately if a health issue related to regulated or unregulated substances ever arises.

Wellhead Protection

Water is a crucial and precious resource for human health, recreation, and the economy. **City of Litchfield Water Department** continues to take steps to protect our water resources. We have a wellhead protection plan in place to safeguard the water from surface contamination. We maintain a good communication with the MN Department of Health and the MN Rural Water Association and the DNR. Our wellhead committee includes, consultants, well drillers, agriculture, and manufacturing personal. This year we have been working with a couple farmers that installed irrigation systems In the city's drinking water protection area.

Compliance with National Primary Drinking Water Regulations

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 pick up 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.
In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.
Drinking water, including bottled water, may 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 Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

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

Questions?
Call the Experts. EPA Safe Drinking Water Hotline (800) 426-4791
Minnesota Department of Health (651) 201-4700 or1-800-818-9318 www.health.state.mn.us/divs/eh/water/swp/swa
City of Litchfield Water Department (320) 693-7201
Spanish: Information importante. Si no la entiende, haga que alguien se la traduzca ahora.