



2017 Litchfield Water System Annual Drinking Water Report

This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it. Información importante. Si no la entiende, haga que alguien se la traduzca ahora.

Making Safe Drinking Water

Your drinking water comes from a groundwater source: four wells ranging from 132 to 165 feet deep, that draw water from the Quaternary Buried Artesian aquifer. Litchfield works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources.

Contact Michael Geers, Operations Engineer, at 320-535-0827 or mike.geers@ci.litchfield.mn.us if you have questions about Litchfield's drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

ASSOCIATION MEMBERSHIPS: AWWA: AMERICAN WATER WORKS

Monitoring Report Summary

This report contains our monitoring results from January 1 to December 31, 2017.

We work with the Minnesota Department of Health (MDH) to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health. Learn more by visiting the MDH's webpage Basics of Monitoring and Testing of Drinking Water in Minnesota (<http://www.health.state.mn.us/divs/eh/water/factsheet/com/sampling.html>).

The tables below show the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the Environmental Protection Agency's limits. Substances that we tested for but did not find are not included in the tables.

We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the Minnesota Department of Health at 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Substances Detected in the Litchfield Water Supply

Level Found	Average						
Contaminant (units)	MCLG	MCL	Range	Result*	Violations	Typical Source of Contaminant	
Arsenic (ppb) (07/12/2012)	0	10	N/A	3.4	No	Erosion of natural deposits; Runoff from orchards; glass and electronics production waste.	
Barium (ppm) (07/12/2012)	2	2	N/A	.31	No	Discharge of drilling wastes and metal refineries. Erosion of natural deposits	
Fluoride (ppm)	4.0	4.0	.59-.61	.62	No	Water additive to promote strong teeth; Erosion of natural deposits.	
Haloacetic Acids (HAA5) (ppb)	N/A	60.0	N/A	5.1	No	By-product of drinking water disinfection.	
Nitrate (as Nitrogen) (ppm)	10.0	10.4	N/A	.88	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	
TTHM (Total trihalomethanes) (ppb)	N/A	80	N/A	33.9	No	By-product of drinking water 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	****	*****	Violations	Typical Source of Contaminant
Chlorine (ppm)	4	4	.08-.92	.46	No	Water additive used to control microbes.

**** Highest and Lowest Monthly Average. ***** Highest Quarterly Average

Contaminant (units)	MCLG	AL	90% < Level	# sites over AL	Violation	Typical Source of Contaminant
Copper (ppm) (08/05/2015)	0	1.3	.91	0 out of 20	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb) (08/05/2015)	0	15	1.3	0 out of 20	No	Corrosion of household plumbing systems. Erosion of natural deposits.

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.) **MRDL**: Maximum Residual

Disinfectant Level- the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of

microbial contaminants. **MRDLG**: Maximum Residual Disinfectant Level Goal - the level below which there is no known or expected risk to health but this does not reflect

the benefits of disinfectant use. **AL**: Action Level- the concentration which, if exceeded, triggers treatment or other requirements system must follow. **PPM**: parts per million. **PPB**: parts per billion. **ND**: Not detected. **N/A**: Not Applicable (does not apply). **EPA**: Environmental Protection Agency **NTU**: Nephelometric Turbidity Units - A

measure of cloudiness of water (Turbidity). **pg/L**: picograms per liter - A measure of radioactivity. **PWSID**: Public Water System Identification. **TT**: Treatment Technique - A

required process intended to reduce the level of a contaminant in drinking water. **Level 1 & 2 Assessment**: is a study of the water system to identify potential problems.

Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Three different groups test Litchfield's water: The MDH, 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.

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: If your drinking water fluoride levels are below the optimal concentration range of 0.7 to 1.2 ppm, please talk with your dentist about how you can protect your teeth and your family's teeth from tooth decay and cavities. For more information, visit: MDH Drinking Water Fluoridation (<http://www.health.state.mn.us/divs/eh/water/com/fluoride/ind ex.html>).

Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of credible, peer-reviewed, scientific evidence that fluoridation reduces tooth decay and cavities in children and adults, even when there is availability of fluoride from other sources, such as fluoride toothpaste and mouth rinses. Since studies show that optimal fluoride levels in drinking water benefit public health, municipal community water systems adjust the level of fluoride in the water to a concentration between 0.5 to 1.5 parts per million (ppm), with an optimal fluoridation goal between 0.7 and 1.2 ppm to protect your teeth. Fluoride levels below 2.0 ppm are not expected to increase the risk of a cosmetic condition known as enamel fluorosis.

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 from your plumbing.

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
pH	7.4-7.7	7.6	6.5-8.5
Iron (ppm)	2.4-3.4	0.02	<0.3
Manganese (ppm)	0.18	0.095	<0.05
Fluoride (ppm)	0.20	0.56-78	0.7-0.9
Hardness (ppm)	320	320 *	

Lead in Drinking Water

You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. Coming in contact with lead can cause serious health problems for everyone. There is no safe level of lead. Babies, children under six years, and pregnant women are at the highest risk. Lead is rarely in a drinking water source, but it can get in your drinking water as it passes through lead service lines and your household plumbing system. Litchfield provides high quality drinking water, but it cannot control the plumbing materials used in private buildings.

Read to learn how you can protect yourself from lead in drinking water. Let the water run for 30-80 seconds before using it for drinking or cooking if the water has not been turned on in over six hours. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home. You can find out if you have a lead service line by contacting your public water system, or you can check by following the steps at: Are your pipes made of lead? Here's a quick way to find out (<https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home>).

The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure. Use cold water for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water. Test your water. In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water. Contact a MDH accredited laboratory to get a sample container and instructions on how to submit a sample: Environmental Laboratory Accreditation Program (<https://apps.health.state.mn.us/eldo/public/accreditedlabs/labsearch.seam>).

The Minnesota Department of Health can help you understand your test results. Treat your water if a test shows your water has high levels of lead after you let the water run. Read about water treatment units: Point-of-Use Water Treatment Units for Lead Reduction (<http://www.health.state.mn.us/divs/eh/water/factsheet/com/poulead.html>).

Learn more: Visit Lead in Drinking Water (<http://www.health.state.mn.us/divs/eh/water/contaminants/lead.htm#Protect>)
Visit Basic Information about Lead in Drinking Water (<http://www.epa.gov/safewater/lead>)

Learn More About Your Drinking Water

Minnesota's primary drinking water sources are groundwater and surface water. Groundwater is the water found in aquifers beneath the surface of the land. Groundwater supplies 75 percent of Minnesota's drinking water. Surface water is the water in lakes, rivers, and streams above the surface of the land. Surface water supplies 25 percent of Minnesota's drinking water. Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

Microbial contaminants, such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.

Inorganic contaminants include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.

Pesticides and herbicides are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.

Organic chemical contaminants include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about your drinking water source(s) in a source water assessment, including: How Litchfield is protecting your drinking water source(s); Nearby threats to your drinking water sources; How easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed. Find your source water assessment at Source Water Assessments (www.health.state.mn.us/divs/eh/water/swp/swa/) or call 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

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 transplant, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Questions?

Call the Experts. EPA Safe Drinking Water Hotline (800) 426-4791

Minnesota Department of Health (651) 201-4700 or 1-800-818-9318 www.health.state.mn.us/divs/eh/water/swp/swa

City of Litchfield Water Department (320) 693-7201

