



2016 Consumer Confidence Report Water Quality

City of Lebanon Department of Public Works Water Filtration Facility EPA Identification Number: 1321010

What is the quality of my drinking water?

The City of Lebanon Water Department is pleased to inform you that your drinking water meets or exceeds all federal and state requirements. We strive to deliver safe drinking water to our customers and to maintain a secure and protected facility. We are proud to deliver the 2016 annual Water Quality Report for the year 2015.

Lebanon's Water Source and Assessment

In 2015, Lebanon Water Works processed **600.338** million gallons of water, which was an increase of approximately 5.45 % from 2014.

Lebanon's source water comes from the Greater Mascoma River Watershed, which encompasses 195 square miles and includes Mascoma Lake, Goose Pond, and Crystal Lake. Based on United States Geological Data the usable capacity of these reservoirs is 7.93 billion gallons.

The protection of our source water is a very important objective. The goals of our Source Water Protection Program are to protect public health by preventing episodes of drinking water contamination, and to maintain and improve water quality in order to reduce treatment costs. Components of the program include delineation and mapping of the watershed, inventory and inspection of potential contamination sources, educational activities, and mailings. As a result of our programs success we receive a reduced frequency of monitoring by regulatory agencies.

NH Department of Environmental Services has prepared a Source Assessment Report for the source serving this public water system, assessing the sources' vulnerability to contamination. The results of the assessment, prepared on May 6, 2002 are as follows: for the Mascoma River, (4) susceptibility factors were rated as high, (4) were rated medium, and (4) were rated low. For more information, about the susceptibility factors contact NH-DES at (603) 271-3139 or contact the Water Treatment Plant Superintendent at 448-2514. The complete assessment report is available for review at the City of Lebanon Water Plant, 65 Pumping Station Rd., Lebanon.

The Water Treatment Plant

Lebanon treats your water with a conventional treatment process that utilizes coagulation, flocculation, sedimentation, filtration and disinfection to remove or reduce harmful contaminants that are or may be present in the source water. The facility provides a series of treatment steps; processes of coagulation, flocculation and sedimentation utilizes polyaluminum chloride and powdered activated carbon to remove naturally occurring contaminants that may include algae, which may affect taste and odor as well as reducing turbidity, bacteria and total organic carbon. Multi-media filtration, (sands and anthracite coal) is used to remove particles and microbes that escape the sedimentation process. Sodium Hypochlorite (a liquid form of chlorine), is used to disinfect water. In addition, Sodium carbonate (Soda Ash) is added to increase pH, calcium carbonate hardness, and alkalinity. Sodium Bicarbonate is added to further raise alkalinity to increase buffer capacity for corrosion control.

Sodium Fluoride is added to promote dental health.

Where Can I get More Information?

For more information about your drinking water contact the Water Treatment Plant Superintendent, Jim Angers at (603) 448-2514, or in writing at 65 Pumping Station Road, Lebanon, NH 03766. Also, you may visit our website at <http://dpw.lebnh.net/home/water> . Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

You are welcome and encouraged to attend Lebanon City Council meetings on the 1st and 3rd Wednesdays of each month. The meetings begin at 7:00 p.m. and are held in City Council Chambers unless otherwise announced. City Council Chambers are located in City Hall, 51 North Park Street, Lebanon, NH 03766. Visit www.LebNH.net or call City manager's office at (603) 448-4220 for more information.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants than the general population. Immunocompromised 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. EPA/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 (1-800-426-4791).

Why are contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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 US Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Description of Drinking Water Contaminants

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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Additional information on Lead

Lead: If present, elevated levels of lead may 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. This water system is responsible for high quality drinking water, but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and cooking. If you are concerned about 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://water.epa.gov/drink/info/lead/index.cfm>

ASSESSMENTS

The Revised Total Coliform Rule requires an assessment or an investigation of the water system when certain conditions occur:

In 2015 we were required to conduct a Level I Assessment			
Number of assessments required in the reporting year: 1		Number of corrective actions required: 0	
Number of assessments completed in the reporting year: 1		Number of corrective actions completed: 0	

2015 Water Quality Table

DETECTED WATER QUALITY RESULTS

Regulated Contaminants

Contaminant	Level Detected	Range	Unit	MCL	MCLG	Violation (yes/no)	Year Sampled	Likely Source of Contamination and Health Effects
Microbial Contaminants								
Coliform	4	Presence/absence				N	2015	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.
<i>E. coli</i> Bacteria	1 (one)	Presence/absence				N	2015	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems
Turbidity	0.058 NTU average	0.026 to 0.416 NTU	NTU	TT <0.3 NTU 95% of operating time and always below 1.0	N/A	NO	2015	Soil runoff. Turbidity has no health effects. However turbidity can interfere with disinfection and provide a medium for microbial growth.
Total Organic Carbon (TOC)	1.5 PPM average	1.3 to 2.3 PPM	PPM	TT	N/A	NO	2015	Naturally present in the environment. TOC has no health effects. However TOC provides a medium for the formation of disinfection byproducts.

Inorganic Contaminants								
Barium	0.010 PPM		PPM	2	2	NO	2015	Erosion of natural deposits, discharge from drilling wastes and metal refineries. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Copper	0.076 PPM @ the 90 th percentile	0.014 to 0.17 PPM	PPM	AL= 1.3 PPM @ 90 th percentile	1.3 PPM	NO	2014	Erosion of natural deposits. Corrosion of piping and household plumbing. Leaching from wood preservatives.
Lead	6 PPB @ the 90 th percentile	1 to 14 PPB	PPB	AL= 15 PPB @ 90 th percentile	0	NO	2014	Erosion of natural deposits. Corrosion of fittings and household plumbing systems. Lead & Copper sampling is required on a 3 year cycle
**Fluoride	0.69 PPM average	0.53 to 0.83 PPM	PPM	4	4	NO	2015	Natural deposits. Water additive to promote strong teeth.
Volatile Organic Contaminants								
Haloacetic Acids (HAA5's)	LRAA 21	13 to 31 PPB	PPB	60 PPB	N/A	NO	2015	Disinfection byproducts, a result of drinking water chlorination.
Total Trihalomethanes	LRAA 46	20 to 83 PPB	PPB	80 PPB	N/A	NO	2015	
Chlorine	1.03 Average	0.34 to 1.21	PPM	4	4	NO	2015	Water disinfectant additive used to control microbes.

Secondary Contaminants

Substance or Parameter	Level Detected	Range of Detection	Unit	SMCL	Violation	Year Sampled	Noticeable effects above SMCL
Sulfate	4		PPM	250	NO	2015	Salty Taste
Manganese	0.013		PPM	0.05	NO	2015	Black to Brown staining, bitter taste
Color	3	1 to 4	unit	15	NO	2015	Visible tint
Chloride	29		PPM	250	NO	2015	Salty Taste
Sodium	27		PPM		NO	2015	Salty taste
Hardness (CaCO ₃)	18	12 to 24	PPM	N/A	NO	2015	
pH	8.12	7.34 to 8.79	units	N/A	NO	2015	A measure of the acidity or alkalinity

Alkalinity	31 average	28 to 36	PPM	N/A		NO	2015
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****Federally Required Fluoride Statement:**

"Your public water supply is fluoridated. According to the Centers for Disease Control and Prevention, if your child under the age of 6 months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child's health care provider for more information."

Unregulated Contaminant Monitoring III

Substance or Parameter	Average Level Detect	Range of Detection	Unit	Minimum Detection Level	Year Sampled	1996 amendments to the Safe Drinking Water Act required the EPA to establish criteria to monitor unregulated contaminants, and to identify a maximum of 30 contaminants to monitor every five years. As a result, the Unregulated Contaminant Monitoring Rule (UCMR) program was developed. The City of Lebanon has participated in the UCMR1 and UCMR2 programs with all analysis results below laboratory detectable levels. Monitoring for the UCMR3 list occurred in 2014-2015.
Chromium	0.08	0 to 0.3	PPB	0.2	2015	
Strontium	37	33 to 43.5	PPB	0.3	2015	
Chromium (VI)	0.03	0 to 0.05	PPB	0.03	2015	
Chlorate	58	41 to 77	PPB	20	2015	

Terms and Definitions

The following definitions explain abbreviations used in the Water Quality Table:

MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. They are set as close to the MCLG's as feasible using the best available treatment technology. **MCLG:** Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety. **NTU:** Nephelometric Turbidity Unit, Turbidity is a measure of the cloudiness of the water. It is monitored by surface water systems because it is a good indicator of water quality and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants.

Abbreviations used in the Water Quality Table: **AL:** Action Level, **MRDL:** Maximum Residual Disinfectant Level, **MRDLG:** Maximum residual disinfectant level goal, **NTU:** Nephelometric Turbidity Unit, **PPB:** parts per billion, **PPM:** parts per million, **RAA:** Running Annual Average **TT:** Treatment Technique, **SMCLs,** secondary maximum contaminant levels, EPA does not enforce these secondary maximum contaminant levels. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations. These contaminants are not considered to present a risk to human health at the SMCL.